

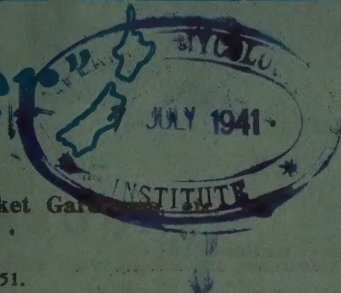
THE FRUIT WORLD

"Market & Grower"

ESTABLISHED 42 YEARS.

Circulates to Growers of Dried, Canned, Deciduous, and Citrus Fruits, Market Gardeners
Throughout Australia, New Zealand and abroad.

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Vol. XLII. No. 5

MAY 5th, 1941

Price 6d.

Special Articles This Month

Orchard Pest Control
The Goulburn Valley, Victoria
Canned Fruits News
Murrumbidgee Irrigation Area
Apple and Pear Acquisition
Pig, Poultry and Home Notes

"Pithy Bits"
Production of Pome Fruits
Potato Culture
Citrus News and Notes
Soya Beans
South Australian News & Notes

Items of Interest from Tasmania

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2 Quality, 12 Size, with Packers' Cull Belts and Sorting Table, Sliding Case Holders with Rest Rail—necessary for Packers.

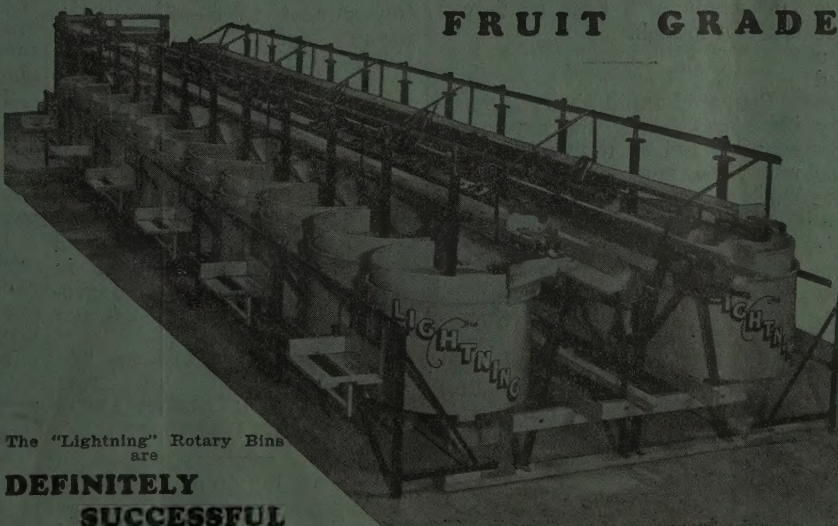
Built in one or more qualities, as desired, with bins on one or both sides—any number of bins.

Latest and most Improved type with latest American design of suspension springing. Quickly changed for various weights of fruit.

Bins of large capacity — each 3-foot bin will hold between 8 and 9 cases.

Bins fill and lower automatically while revolving—the inner tray being specially designed to maintain a uniform height of fruit.

"Lightning" Rotary Bins fill correctly because they are protected by "Lightning" Patents and design.



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EXCLUSIVE FEATURES
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- Latest American suspension Springing.
- Special slides to floating tray, which enables fruit to rise perfectly.
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- Bins definitely fill automatically and rise, keeping the fruit at bin top level.

A great time saver.

Continuous operation gives INCREASED CAPACITY by increasing the packers' output, thus reducing costs.

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"LIGHTNING" GRADERS

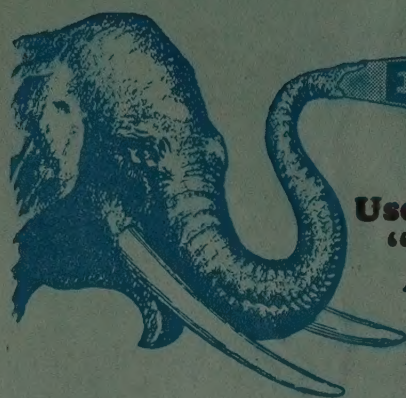
1-2 to 5 qualities for color grading and packing to count.
INDEPENDENT SECTION ROLLER—all chain driven—also friction drive.

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SPECIAL SORTING ELEVATORS with Patented Scalloped ROLLERS to prevent injury.
PATENTED PEAR ROLLER prevents stems being chopped off.

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Extract from "BETTER FRUIT," by Dr. R. L. Webster, Entomologist, State College of Washington, Pullman: CODLING MOTH COVER SPRAYS—"Ever since the imposition of an arsenic tolerance in 1926, and even before that time, investigators have been testing other materials which may be used in place of lead arsenate. Following all these intensive and extensive investigations lead arsenate appears to have certain inherent qualities which place this material foremost as an insecticide for codlin moth control."

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Motor Notes

CHARCOAL BURNING.

Small Pits Best.

COUNTRY DRIVERS who have gone on to producer gas and decide to burn their own charcoal, are directed to a paragraph in the S.A. Journal of Agriculture, in which Mr. R. Elliot explains how he makes charcoal.

The method used is to excavate a pit 3 ft. deep, 3 ft. wide, and 7 ft. long in fairly hard ground. Make a fire of small sticks all over the bottom of the pit, then put in a light layer of stumps and let them get well alight. Then throw in more stumps to make a layer of about 1 ft. in thickness, then let that burn until it is practically all coals. Then throw in another layer of stumps of about the same thickness, again letting the whole burn to coals, and continue the process until the pit is nearly full, finally heaping the stumps on top until they are above ground level. After these have burned down, cover with a couple of sheets of corrugated iron. Support these with two long pieces of old machinery iron to keep the corrugated iron from sagging and finally cover the top with loose earth to make the pit airtight. This is very necessary, for unless the pit is absolutely airtight, the stumps will continue to burn slowly and will burn until the whole is destroyed.

Leave the pit closed for about two days to make sure the fire is out before opening. In taking the charcoal from the pit, it is necessary to sift the ashes, sand and coal dust from the charcoal. Do this by digging out the coal and throwing it on to a sloping screen made of fine mesh netting fastened to a wooden frame. If the charcoal is used for a producer gas plant, coal of a uniform size gives the best results. This can be obtained by using two screens—a coarse one on top to keep out the larger coal, and

the fine one on the bottom to take off the dust. In burning large quantities of charcoal, a number of small pits are preferable to one large one; they are less trouble to cover and can be filled in turn as they burn, and thus keep the attendant busy and on the job all the time. He will not have to wait for the pit to burn down to be re-filled. Do not allow the layers to overburn, or there will be too much ash and small coal.

LEAKS IN EXHAUST ARE HARD TO TRACE.

Although fumes may cause annoyance to occupants of cars, slight leaks in the exhaust pipe are difficult to trace. The best way of finding the leak is to put the vehicle on a hoist, and while the engine is running inject a small quantity of paraffin through the carburettor intake. Then partly plug the tail-pipe, and smoke will thus be forced out of the leak.

Repeated rapid throttle openings, or tapping the expansion chamber lightly with a hammer, will sometimes show up loose baffle plates.

DECARBONISING.

When decarbonising, remember that there is always the possibility of some of the dislodged carbon getting into the cooling system. Trouble will result if this happens when a pump or water impeller is used in the system.

The method of stuffing pieces of rag into the openings is all right if done carefully, but there is always the risk of dirt entering the holes, when the rag is removed.

Close the holes with corks sufficiently long to allow a good portion to protrude for easy removal.

New Zealand News and Notes

RESULT OF ADVERTISING CAMPAIGN.

The N.Z. Government's advertising campaign last year resulted in local sales of Apples exceeding those of the previous year by a million cases.

Retailers co-operated by pushing case sales to the public, and the railway stations and dairy farmers also gave valuable assistance.

CODLING MOTH INFECTION.

The recent wet weather in New Zealand has resulted in a recurrence of codling moth infection of Delicious Apples, and those showing the effect of the moth to the extent of more than 5 per cent. will not be accepted from growers by the Internal Marketing Department.

It was stated by a growers' representative in Auckland that the industry would look to the Government to compensate it for any loss.

AUCKLAND MARKET.

Cox's Orange Pippins.

A surplus of Cox's Orange Pippin Apples on the Auckland market last month resulted in this variety being sold to grocers and fruiterers at 2/- per case.

APPLES FOR AUCKLAND CHILDREN.

Fifteen hundred cases of choice varieties of Apples were despatched by the Internal Marketing Division to schools in the city area of Auckland for consumption by the children.

This first distribution was arranged during March, and it is part of the Government's scheme to provide an Apple a day, free, to all school children.

When the scheme is fully working, country schools will also participate.

N.Z. CITRUS INDUSTRY.

An assurance to N.Z. citrus growers that the Government had no desire to make profit from the industry and all net realisations would be paid out to them, was made recently by the Minister of Marketing, the Hon. J. G. Barclay, in an interview with members of the Lemon Marketing Advisory Committee.

The Committee consisted of Messrs. A. R. Emanuel (Kerikeri), T. R. Hunt (Tauranga), and H. H. Booth (Auckland).

The growers' representatives asked for an increase in the coming year of the bonus on last year's supplies, and they were assured by the Minister that they would receive full consideration immediately the figures for the financial year were available.

The Committee recommended the imposition of a case levy on all Lemons handled by the Internal Marketing Division of not more than 1d. a case, with a maximum charge of £2 a grower.

The Committee said as it approved the Department's policy of importing Lemons in such quantities as were needed to keep the market adequately supplied during the off season.

**POULTRY IS A PROFITABLE
SIDE LINE FOR
ORCHARDISTS.**

Read the . . .

"Australasian Poultry World"

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News of the Month

THE OSLO DIET, which contains only wholesome foods plus fresh fruit, has proved successful in winning back the health of undernourished children; it is a system which shows how the public can obtain nutritious meals at the least possible cost.

The plan commenced among poor children in a crowded Melbourne suburb, and spread to the other States and New Zealand.

Now the plan is in danger of failing in Victoria through lack of official and public support. Milk is being supplied free by the Milk Board, Oranges by the V.C.C.A., and Apples by the Apple and Pear Board.

Fruit growers throughout Australia will be the losers if this plan ceases to operate, as a practical demonstration has been given for the necessity of fruit in the diet.

It is an indictment against our present system that a voluntary system of research into the nutrition of children should be in danger of extinction. Many people are asking why there should be such a vast proportion of the rising generation permitted to suffer from mal-nutrition in a land where food is produced in superabundance.

Apart altogether from that aspect, however, the public generally should see to it that the Oslo diet system is continued, as the results of this research work are of inestimable value to the whole community.

THE FOREGOING is but one side-light on the problems facing Australia to-day.

Owing to lack of export facilities, primary industries which depend upon export are in sore straits. The Acting Prime Minister (Mr. Fadden) revealed that loss on export trade is expected to impose the following additional charges on the Federal budget in relation to the following commodities:—Wheat, £10,000,000; sugar, £500,000; meat, £1,000,000; butter, £5,000,000;

other items, £500,000: Total,
£17,000,000.

In this issue reference is made to the serious plight of the pig-raisers and the potato industry. This is apart from the problems of the Apple and Pear growers, and the meat and wool industry. Should the war go on, the position will become more acute. Doubtless our Governments and the leaders in industry are thinking deeply on these subjects, but it is certain a plan needs to be devised by which the produce of this country shall be distributed in the building up of the health and fitness of this nation.

Poverty amid plenty should never be tolerated in Australia.

Enterprises which could stand curtailment are those dealing with patent medicines, synthetic "fruit" drinks, and de-vitalised foodstuffs on which fabulous sums are spent in propaganda in bemusing the public.

At a recent conference of retailers held in Sydney, a resolution was carried favoring the closing of fruit shops at 7 p.m., excepting the beach and King's Cross areas.

The fruit producers are left wondering as to the reason for this proposal to curtail the facilities for the sale of their products when the shops selling teeth-destroying sweets are kept open for much longer hours.

Resolutions expressing dissatisfaction with the Apple and Pear Acquisition Scheme, were carried at the last meeting of the Fruitgrowers' Federation of New South Wales.

Interesting comments on pruning are contained in the article in this issue, entitled "The Production of Pome Fruits."

Fruit fly investigations in N.S.W. indicate that a foliage poison spray offers a more effective way of protecting fruit than of a trap baited with vanil-

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la-ammonia lure, and also that the tartar emetic foliage poison spray is apparently more effective in destroying the flies than the sodium fluosilicate spray.

IRRIGATION IN MURRAY VALLEY.

Strong representations are being made by the Murray Valley Irrigation League to secure the £500,000 needed to complete the Scheme to Picola (Vic.). It is urged that a partial solution of post-war problems will be found in the completion of the Murray Valley irrigation project.

By crossing Grapefruit with Mandarins, a new citrus variety to be known as Pearl Tangels, is reported from California, and stocks will shortly be released to citrus districts.

PITHY BITS ...

by "GADABOUT"

The War.

A STORY is told of a youngster who in saying her prayers said: "Take care of Dad — Mummie and Bill, and, oh God, take care of yourself, for we all need you so much now."

Human affairs seem to be getting too complicated and too dreadful for any human mind to direct and yet, and what a yet, behind it all, sometimes only dimly felt, is the determination to fight for Right, for Justice and for Liberty. Man calls it Duty, just a little word of four letters, but it stands for that for which men and women are eager to strive, to suffer and to die.

It is "Peace time's" greeds and low ambitions that have sunk us into hell; not that oft hidden "something" that other than

Love is the only thing "Divine" in the human heart, and is that which calls to us and gets its answer in service and sacrifice.

Thus has the Soul of our fighting units been born. In the words of Gillespie Douglas:—

"What noble spirits often dwell in human clay

Unseen, until the call for sacrifice is made:

Then out of human night does spring eternal day,
A radiant light, a glory which will never fade."

What a Sacrificial Altar our Empire has offered itself on, so too have the smaller nations, who have fallen—BUT—what a triumph when the day of triumph comes.

The darker the hour we are living through, the nearer the sunburst of dawn.

It is difficult midst "Earth's exalted moments" to bring our thoughts down to "Earth's ignoble strifes," but let's to it.

:: :: ::

Apple and Pear Acquisition.

The Commonwealth Parliament's Special Committee will be hearing evidence in Victoria in a week or two—NOW GROWERS, WAKE UP—What are you asking for? What do you want? What have you suffered? How have you been helped? and what better lines can the Board operate on? SPEAK UP NOW or forever hold your peace.

Send all you know to GADABOUT, c/o "The Fruit World," Box 1944 G.P.O., Melbourne, C.1. These columns are open to help you. Help us to help you.

:: :: ::

Free Thought and Free Advice.

If you've got a heavy cold get wrapped up in your work.

If you want to get heated, lose your temper.

If you want to be heard, talk like a politician.

If your neighbor's cow gets into your orchard, milk it and put it out, but above all, milk it.

You may have a gross income, but like the fisherman, what is your "nett" income?

If you need a shower, take one.

How prosperous are you? Do you know the taste of burnt cork when you smoke a cigarette?

Do you express gratitude? Don't you owe a great deal to the Debts Adjustment Board, your tradespeople and the Government?

Was it in a restaurant you met One Romeo, one Juliet, Was it there you first fell into debt, When Romeo'd what Juliet.

Be ambitious. Don't stop at home and wash the kid: Go abroad and wash a white elephant.

What about the "Sun and Air"? Perhaps you're not even married.

A man is as powerful as his breath. Try an onion and get busy.

Some of us have got broad acres and narrow visions; others neither.

Are you A MISTER-CAN'T
A MISTER-CAN
or A MISTER-EE?

"Why does Biggs, the confirmed bachelor, seem so crestfallen?"

"He was out dining with a young lady when she spotted a gentleman friend at a near-by table."

"What's wrong with that?"

"Biggs said, 'Let's have him join us'."

"Yes, go on."

"The young lady quickly replied, 'This is so sudden, dear; that's our minister'."

As Spraying is a Necessity —then use the World's Best—

NEPTUNE SPRAYS...

The better quality of NEPTUNE Sprays is always obvious by comparison with others. NEPTUNE Sprays conform to the highest standards, and they are consistently uniform in strength and quality. Successful Orchardists recommend them. Try them yourself and prove that they're better!

NEPTUNE WHITE SPRAYING OIL (SUMMER SPRAY)

NEPTUNE PREPARED RED
SPRAYING OIL
(“A,” “C,” or Heavy Base)

NEPTUNE PALSOL
(Prepared Pale Oil)

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(Winter White Oil)

NEPTUNE LIME SULPHUR
SOLUTION
(Clear, amber-coloured, free from sludge)

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BLUESTONE
CHEMICAL SULPHUR

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BERGER'S ARSENATE
(Powder or Paste)

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ENGLISH BLUESTONE
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GENUINE BLACK
LEAF 40

NEPTUNE LIME
POWDERED SULPHUR

COPPER SPRAY

NEPTUNE SPRAY
SPREADER



Orchard Pest Control

Valuable Research by Council for Scientific and Industrial Research

MUCH HELPFUL INFORMATION is contained in the annual report of the Council for Scientific and Industrial Research, just to hand. Some of the items are as follows:—

Insecticides.

On the outbreak of war it became apparent that the overseas supplies of certain insecticides might become irregular or even cease, and so a survey was made of the sources, supplies, and amount required of the principal toxic materials used in Australia. On the whole, Australia is in a relatively satisfactory position, largely because she is almost self-sufficient in supplies of arsenic, but there are possibilities of shortages which, if they occurred in a season when insect pests were very abundant, might seriously affect the return of certain primary products.

Orchard and Fruit Pests.

(i) **Codling Moth** (*Cydia pomonella*): In previous reports, mention has been made of the role of nicotine in codling moth control. During investigations of the possibilities of increasing Australian nicotine production, it was seen that very little fundamental knowledge is available regarding the solubility of nicotine in the presence of salts, though the process of salting out has been patented as an extraction method for the alkaloid. This solubility has been investigated, with the result that, though the study is still incomplete, sufficient data are now available to provide valuable information regarding the equilibria involved in separating nicotine by salting out.

A study of the mode of action of arsenicals has been undertaken and, as readily applicable methods have been devised in

the Division for such studies on the larvae of the sheep blowfly (*Lucilia cuprina*), this was the first test insect used. The investigation will be extended to codling moth larvae as soon as a satisfactory technique can be evolved for feeding the larvae with known amounts of poison. When using sheep blowfly larvae, the method of analysis for arsenic recently described by Cassil and Wichmann in America was found to be very useful after slight modifications were made, resulting in the final stage of the determination being made colorimetrically using the starch-iodine reaction. The amount of arsenic in larvae which have received a toxic dose of sodium arsenite has been found to be about 0.2 to 0.3 micrograms of arsenic pentoxide per larva. The work of tracing the seat of action of the poison is proceeding.

Oriental Peach Moth (*Cydia molesta*).

In the Goulburn Valley, Victoria, in the Spring of 1939, there was a low initial moth population following the intense heat-waves of the preceding Summer. Although the number of moths increased in the first generation, there was a marked decrease in abundance in the second and third generations during January and February. This was probably caused by cool evening breezes in December and January, and early frosts in February which prevented the moths from laying their eggs. The moth population increased slightly late in the season, and Quinces were very lightly infested. Infestation was low (5 per cent.) in the late Peaches. In the small infested districts in the Murrumbidgee Irrigation Areas, only a very small number of infested shoots were found in two orchards in the Spring of 1939,

and no moths were seen in the traps at any time during the season.

At the end of the 1938-39 season only small numbers of the American parasite *Macrocentrus ancylovorus* were recovered from one orchard after the heat-waves of the Summer months. In the following Spring, however, small numbers of parasites were recovered from this orchard before the release of any parasites this season. Thus *M. ancylovorus* survived the heat-waves during the 1938-39 Summer, then successfully carried through the Winter, and began breeding again in the Spring. In the Spring of 1939, further consignments of *M. ancylovorus* were introduced and released at numerous points throughout the Goulburn Valley. At the end of this season a good number of parasites were recovered from seven different orchards scattered over a wide area, indicating that *M. ancylovorus* was established at a number of points, and that it was breeding in the orchard. Its abundance increased markedly during the latter part of the season. Further parasites will not be introduced from America next Spring, but an extensive survey of the district will be made to see where parasites have become established and whether they are spreading naturally.

Much attention was given to the improvement of methods of breeding *M. ancylovorus* under laboratory conditions.

Red-legged Earth Mite (*Holotydeus destructor*): During field surveys in Western Australia in previous years, attempts were made to estimate the damage inflicted by the earth-mite on subterranean clover pastures. Such knowledge was necessary to decide what expenditure on control measures was justified. As no definite conclusion could be reached from general observation, an attempt was made to determine the damage experimentally. Plots were sown with subterranean clover and were isolated by metal barriers smeared with creosote. Mites were added to some, whilst

New Nectarine

"P. Flood," Originated in Brighton. Outstanding quality and market value. Orchardists should plant this variety. I can offer well-grown trees worked from the original.

G. L. COLE

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Phone: Tyabb 252.

others were kept free of mites. In the first season, during which, however, the plots could hardly be compared with an established pasture, foliage yields of the subterranean clover were depressed by the heaviest mite attack to an extent which was just significant. The damaged plots were observed to wilt at the end of the season much earlier than those undamaged, and thus their growing period was reduced and production lessened. Seed yield of the clover was greatly reduced by the attack of the mite. Although very severely retarded in growth by heavy mite attack, subterranean clover seedlings were only rarely killed. Owing to the very dry conditions in the Autumn of 1940, the clover on the plots stocked with mites suffered severely from their attack. The plants in the controls, however, remained healthy and far exceeded the attacked plants in growth.

Pea Weevil (*Brachus pisorum*): A large consignment of the parasitic wasp, *Triaspis thoracicus*, was received from France and placed in quarantine in Canberra. From this material 1,640 parasites were sent to Western Australia, where they were liberated in three pea-growing areas. Subsequently, the wasp was recovered from one of these localities, which gives reason to hope that the parasites may become established in the field.

YOUNG FARMERS.

Office-bearers of the Mooroopna (Vic.) Young Farmers' League were recently elected as follows:— President, T. A. Meaklim; Secretary, D. Oliver; Treasurer, S. H. Meaklim; Auditor, G. Doherty.

Blyth's "BLUE BELL" Quality Sprays

MADE IN AUSTRALIA

For Over Twenty-five Years "BLUE BELL" Arsenate of Lead has Proved a Faithful Friend to Growers.

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CODLIN MOTH CONTROL

By Arthur D. Borden, University of California.

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New South Wales: Lanes Ltd., 69 Abercrombie St., Sydney.
Queensland: A.C.F. and Shirleys Fertilizers Ltd., Brisbane.

South Australia: George Wills & Co. Ltd., Gilbert House, Gilbert Place, Adelaide.
Western Australia: Gibbs, Bright & Co., 179 St. George's Terrace, Perth.

Works: PRAHRAN GROVE, ELSTERNWICK, VICTORIA

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Highest Grade and Purity

Manufactured in Australia by

VICTOR LEGGO & FARMERS Ltd.

222 Queen Street, Melbourne

Phone M 3344

P.O. Box 508H

Supplies Obtainable All Stores

Production of Pome Fruits

CONTOUR PLANTING — GREEN MANURING — INTERNAL CORK OF APPLES — THE "SMALL" JONATHAN PROBLEM — CONTROL OF INSECT PESTS.

(By C. G. Savage, Chief, Division of Horticulture, N.S.W. Dept. of Agriculture.)

I TEMS OF INTEREST in the production of pome fruits on the Northern Tablelands of N.S.W. were recently compiled by Mr. C. G. Savage, and are included under the following headings:—

Soil Management.

Contour Planting: In the past sufficient attention has not been given to the prevention of the loss of surface soil by erosion, with the result that the productivity of many orchards has been sadly reduced, and in some instances orchards have been ruined.

When setting out new orchards, especially on slopes, very serious consideration should be given to planting the trees on the contour system. On this method the trees are planted across the slope of the hill along the more or less natural contours of the land. Cultivation of the orchard is carried along the contours and not up and down the slopes.

By planting the trees and working the land along the contours, the flow of water across the hill is much slower than is the case if cultivation depressions run down the hill. With the slow flow of the water the soakage into the land is much greater and the wash of the soil is reduced to a minimum.

On steep hillsides the erection of contour banks through the orchard may be necessary, the distance apart of these banks will depend upon the fall of the land. The steeper the fall the closer it will be necessary to construct the banks.

In established orchards, much can still be done to prevent further erosion of soil by the erection of contour banks through the orchard. Some difficulty may be experienced in building the banks owing to trees coming on the line of contours, but these difficulties can be overcome by slight variations in the fall of the banks.

Officers of the Division of Horticulture will be pleased to give advice and demonstrations of laying-out orchards on the contour system.

Green Manuring: One of the main factors in maintaining soil fertility is the replenishment of organic matter, which, owing to cultural operations and Summer heat, is rapidly depleted in many soils. Until recent years the advice was to keep a fine mulch on the soil and maintain clean cultivation. The day of the dust mulch and clean cultivation has gone, for a finely pulverised surface soil, especially where the orchard is planted on

a slope, is very subject to erosion during periods of heavy rainfall. A soil also low in organic matter is also subject to soil erosion.

Bearing these factors in mind, some growers have gone to the other extreme and have more or less allowed their orchards to go back to sod culture. That may be alright under certain conditions, especially in areas of very heavy rainfall, which is more or less uniform throughout the year or, even during Summer months. Where dry spells are likely to be experienced during the hot Summer months, then care must be exercised in the control of weed growth, as loss of soil moisture by transpiration through the leaves of the weeds becomes very great and may have a disastrous effect upon the trees.

Where cover crops are grown, especially where they are allowed to continue well into the early Summer, a word of warning must be sounded. The fruit trees might suffer through the cover crops taking up the available nitrogen in the soil. In such instances growers are well advised to apply dressings of nitrogenous fertilizers in the late Winter or early Spring, say a dressing of from 2 cwt. to 5 cwt. per acre.

The sowing of green manure crops during the Autumn and allowing the crops to grow throughout the Winter months and well into the Spring is advocated. Many classes of crops can be used, the legumes are most widely advocated because of the nitrogen fixing bacteria that live upon the roots of the plants. Cereals are also valuable, as also are the volunteer weed crops.

Where cover crops are sown liberal dressings of superphosphate should be applied with the seed to encourage plant growth. If cover crops are not sown, a dressing of superphosphate to the surface soil during Autumn will tend to promote good weed growth in a volunteer green manure crop.

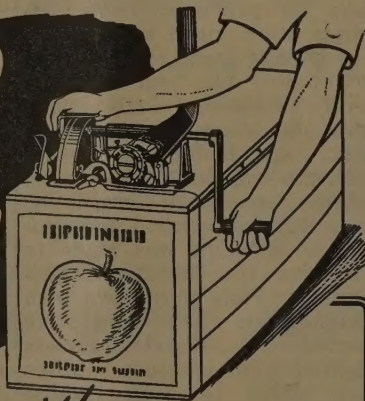
Internal Cork of Apples.

This trouble which was so apparent on the Kentucky Settlement and other places in New England, and to a lesser extent in other parts of the State, has proved to be due to a deficiency of one of the minor or obscure mineral requirements of the Apple, viz., Boron.

Experimentation has shown that spraying the tree with a weak borax solution, or injecting boracic acid into the tree, or by applying borax to the soil, control of this deficiency disease can be readily brought about.

(Continued on page 14.)

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SAFELY**



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UNSIGHTLY DAMAGED PACKAGES
PILLAGES AND ULLAGE
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NEW SOUTH WALES

Murrumbidgee Irrigation Areas

RECORD WINE GRAPE AND PEACH CROPS — CITRUS EXPORT — REVOLUTIONARY CULTURAL AND WATERING METHODS.

(By Our Correspondent.)

RECORD WINE GRAPE CROP. Mr. A. C. Clifton, Viticultural Instructor, of the Department of Agriculture, Griffith, early in the season stated that he expected the wine Grape crop to be about 16,000 tons.

Although Grapes are still coming forward, it is now certain that a record crop of 17,000 tons will be reached.

Growers in general, considering the present state of shipping, feel very thankful to the wine companies for processing the whole of this huge crop.

Peach Crop Also a Record: Canning Peach growers have completed a very satisfactory season, as regard tonnage and price.

The combined figures for the Area make a total of 10,000 tons for the season.

Citrus Export to New Zealand: The citrus export to New Zealand has ended for the season with a total of approximately 100,000 export cases.

Maintenance of this market depends on the absence of fruit fly from the Area, and, in this regard, considerable praise is due to the officers of the Department of Agriculture in keeping the various districts free of this pest.

Export Grapes: Growers of Ohanez Grapes are not pleased with their prospect of disposing of their crop through the usual channels.

Only a small quantity has been exported, and it would appear that the remainder will be taken by the wineries at prices ranging from £2/10/- to £3, whereas exporters usually pay in the vicinity of £16.

Revolutionary Cultural and Watering Methods.

Considerable interest is being shown in new methods of cultivation and irrigation being practiced by two leading growers at Griffith.

Mr. H. J. Braund, a citrus grower of long experience and an officer of the W.C. and I.C., has, for the past two years, been growing various types of clover as a permanent cover crop.

The clover is mowed at intervals, and, if the growth is too heavy, it is raked up and used as fodder. Otherwise it is allowed to lie on the ground as a mulch.

Mr. Braund uses a sprinkler system of irrigation.

Main points claimed for this method of permanent cover cropping are as follows:—

1. Lowering of water table by deep penetrating roots.
2. Maintenance of soil structure.
3. Feeding roots are not disturbed by cultivation and are kept cool by the mat of clover and subsequent mulch.
4. Nitrogen is added to the soil.

Complete records are kept by Mr. Braund, and, in addition to the cover cropping, one notices considerable work being done in cutting back methods, grafting and inarching.

Mr. Ern. Ebert, one of our leading Peach growers, is also using the clover cover crop, but handles it in a different way.

The crop is not cut, but, after seeding, is disced in lightly. The seeding makes provision for the next season's crop.

Mr. Ebert uses the contour bay system of irrigation and claims that the main benefits to be derived from this system are as follow:—

1. Better penetration of heavy soil.
2. Ease of control. (Water may be applied without furrowing out).
3. With clover crop, picking lorries and men may work on the ground much sooner than with old cultural methods.

With about thirty acres of eight-year-old Peach trees of Phillip, Golden Queen and Pular varieties, Mr. Ebert harvested the very satisfactory average of 14 tons to the acre.

Rice Harvest: Rice harvesting has commenced, and, with a continuance of the remarkably mild and dry seasonal conditions, growers expect to harvest a very good crop.

"With what weapon did Samson slay the thousand Philistines, Tommy?" asked the Sunday School teacher.

"The axe of the Apostle," replied the child after a long pause.

Fruitgrowers' Federation of N.S.W.

RETAIL DISTRIBUTION — TRANSPORT CONFERENCE — HAIL INSURANCE — "EAT MORE FRUIT" CAMPAIGN — FRUIT FLY INVESTIGATIONS — APPLE AND PEAR ACQUISITION.

A MEETING of the Board of the Fruitgrowers' Federation of N.S.W. was held at Sydney on April 9 and 10, 1941.

There were present General J. Heane (in the chair), Messrs. F. B. Mackenzie (Kurrajong), K. H. Todd (Griffith), S. A. Stanford (Orange), P. W. James (Dural), A. A. Wilkinson (Uralla), A. E. Lillicrapp (Gosford), H. A. Stevenson, L. T. Pearce, and E. E. Herrod (Secretary).

Apologies were received from Messrs. A. S. Brown, A. E. Her-ring, and C. G. Savage.

Retail Distribution Conference: The President reported that he had attended the Retail Distribution Conference called by the Premier, in company with Messrs. F. B. Mackenzie and S. A. Stanford. Favorable opinions were expressed regarding the benefit which should result.

Transport and Traffic Conference: Mr. F. B. Mackenzie reported having attended a Conference called by the Chamber of Fruit and Vegetable Industries on March 19. The Conference was representative of the following industries: Wholesale distributors, carriers, Fruit-growers' Federation of N.S.W., bulk loading organisations, and the Railway Commissioner.

Mr. Mackenzie said that a Committee was being formed to consider the problems, and this Committee would comprise one delegate from each of the organisations present, including two bulk loading representatives (one from the coast and one from inland areas). Mr. Mackenzie was elected to represent the Federation, and Mr. Yarnall had been elected by coastal bulk loading organisations.

Hail Insurance: Mr. H. V. Smith (Batlow) said much damage to Apple and Pear crops had been caused by hail, and strenuous efforts had been made to obtain relief. The N.S.W. Apple and Pear Committee had

made a deduction on a per case basis to establish an insurance fund, but, it was stated, this had been declared illegal, and the amount deducted was being refunded. Further representations are now being made to the State Government to secure financial assistance for those growers who have suffered heavily as a result of hail. The following motion was drafted with the purpose of obtaining an expression of opinion from the Fruitgrowers' Federation District Conferences:—

"That necessary legislation be passed to enable the Apple and Pear Board to make a deduction for the purpose of providing a fund to compensate growers for losses due to hail damage."

Shortage of Labor: Discussion indicated that there could be a shortage of labor in fruitgrowing districts, and the District Conferences were invited to express an opinion on the following:—(a) Is there a shortage of labor in your district? (b) What do growers attribute it to? (c) Are laborers drifting into war industries? (d) Is the shortage due to the call-up for military service? (e) To what extent is it due to mechanisation of industry? (f) To what other cause is it due?

Docket System in the Markets: A deputation comprising representatives of the Orange Producers' Rural Co-operative Society and the Federation, waited on the Minister for Agriculture regarding the enforcement of the docket system in the markets when cash and credit sales were being made. The Registrar of the Farm Produce Agents' Act, Mr. Butler, received the deputation on behalf of the Minister, and an informative discussion resulted.

Publicity and the "Eat More Fruit" Campaign Committee: It was reported that the "Eat More Fruit" Committee, operating on

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Large Quantities in all Leading Varieties

OUR CITRUS TREES—buds supplied by the BUD SELECTION SOCIETY—are well grown on virgin soil, and should give every satisfaction for profitable returns.

Early Booking is advisable for Later Delivery.

CATALOGUE FREE on application.

L. P. ROSEN & SON

"Fernhill Nurseries," Pennant Hills Road, CARLINGFORD, N.S.W.

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ESTABLISHED 1901.

funds subscribed by the State Government, the Rural Bank of N.S.W., and the Fruitgrowers' Federation, had conducted publicity in regard to Bananas, Plums, Peaches and Grapes, and that publicity in regard to Grapes would continue during the period of heavy supply from the Murrumbidgee Irrigation Area. In addition, 10,000 citrus recipe books had been prepared, and distribution of these would commence when the Navel season indicated the time for distribution to be appropriate. The

"Eat More Fruit" Committee had also decided to assist the introduction of the OSLO Luncheon for small children at the Camperdown Children's Playground, where 25 children will be given this special diet over the next three months.

Fruit Fly Investigations: A report was received from the Senior Entomologist, Department of Agriculture, Mr. S. L. Allman, regarding the use of gauze fly proof cages which had been erected with money sub-

scribed by the Fruitgrowers' Federation. The cages were erected over trees at Carlingford, the test being made with Red Shanghai Peach trees. Tests were conducted with the treatment prescribed by the regulations, e.g., trapping with the standard vanilla-ammonia lure and foliage poison spraying with sodium fluosilicate and tartar emetic sugar baits. The report submitted was merely of a progress nature, but observations made indicated that a foliage poison spray offers a more

effective way of protecting fruit than of a trap baited with vanilla-ammonia lure, and also that the tartar emetic foliage poison spray is apparently more effective in destroying flies than the commonly used sodium fluosilicate spray. Investigations are to be continued.

Apple and Pear Acquisition Scheme: A lengthy discussion took place in regard to the Apple and Pear Acquisition Scheme, and its application to the present crop. The following resolutions were then agreed to:—

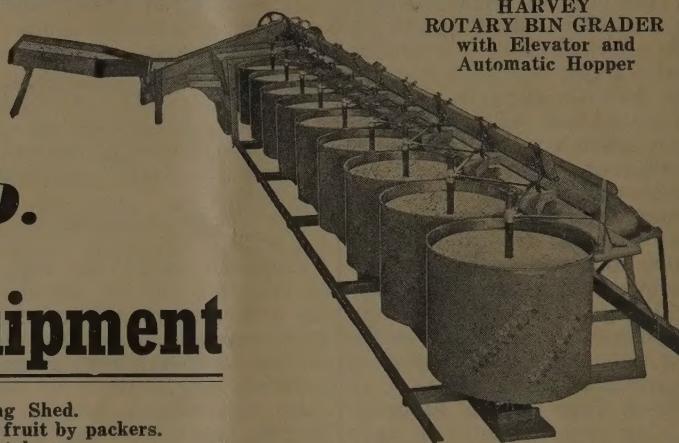
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DANIEL HARVEY LTD.

INTRODUCING

Rotary Bin Grading Equipment

Made in sizes to suit the Small Grower and the Largest Packing Shed.
Rotary Bins considerably increase the average daily output. No pawing of fruit by packers.
Stem punctures and bruises eliminated. Write for catalogue.



HARVEY
ROTARY BIN GRADER
with Elevator and
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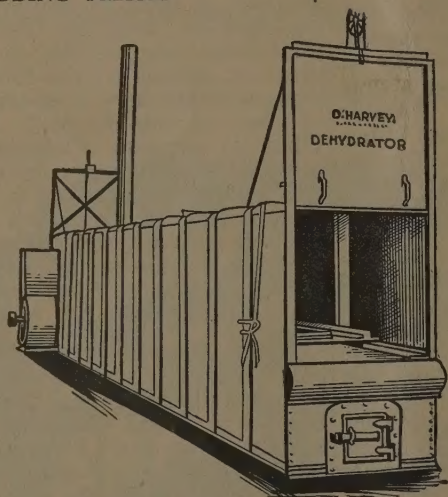
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CITRUS WASHING & STERILISING PLANTS (Hot or Cold)
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CITRUS POLISHING MACHINES
TOMATO GRADERS
PASSIONFRUIT GRADERS



The "Harvey" Citrus Washing Plants
SAVE SPACE — CAN BE USED WITH HOT OR COLD WATER.

Fruitgrowers —

The "Harvey" ^{Air} Re-Circulation Dehydrator

Solves the Problem of Marketing The Fruit Crop

SUCH AS APPLES, PEARS, PRUNES, APRICOTS, PEACHES, SULTANAS, Etc.

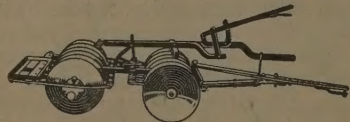
It is the best, cheapest, and most efficient type of dehydrator known. Used by all the most up-to-date Packing Houses and Sheds.

Large Output — Economical to Operate

The Fruit is placed in one end and comes out at the other dried to Perfection.

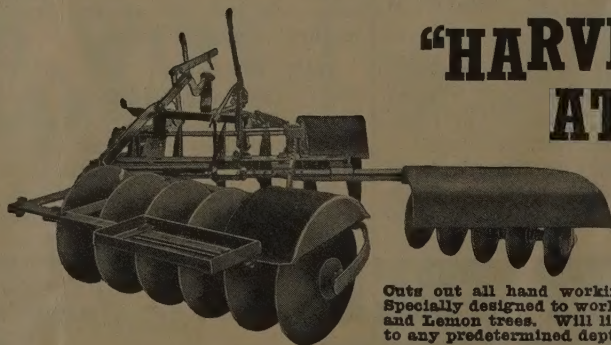
REMOVE SPRAY WITH THE "HARVEY" NEW HORSE HAIR BELT TYPE POLISHING MACHINE.

"HARVEY" IMPLEMENTS Make Good Work Easy



"HARVEY" PATENT OFFSET TANDEM DISC CULTIVATOR: Cultivates right up to the butts of the trees or vines while the Tractor is driven right out in the middle of the row. Proved to be an excellent machine for deeply cultivating heavy irrigation land.

A Harvey Implement for Every Need



"HARVEY" CITRUS DISC ATTACHMENT

WITH HOOD FITTED TO WORK WITH
"HARVEY" PATENT OFFSET TANDEM TRACTOR DISC CULTIVATOR.

Cuts out all hand working under citrus trees, and keeps the ground level. Specially designed to work right under the limbs up to the trunks of the Orange and Lemon trees. Will lift limbs loaded with fruit off the ground, cultivating to any predetermined depth, and then gently putting back in position the fruit-bearing limbs without injuring the fruit or fibrous roots. Cuts out all weeds without clogging.

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S.A.—Silbert, Sharp & Bishop, Bundle St., East Adelaide.
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Southern Tasmania—Southern Implement & Machinery Coy., Market Place, Hobart.
Northern Tasmania—Max Gees, Launceston.
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Goulburn Valley (Victoria)

News and Notes

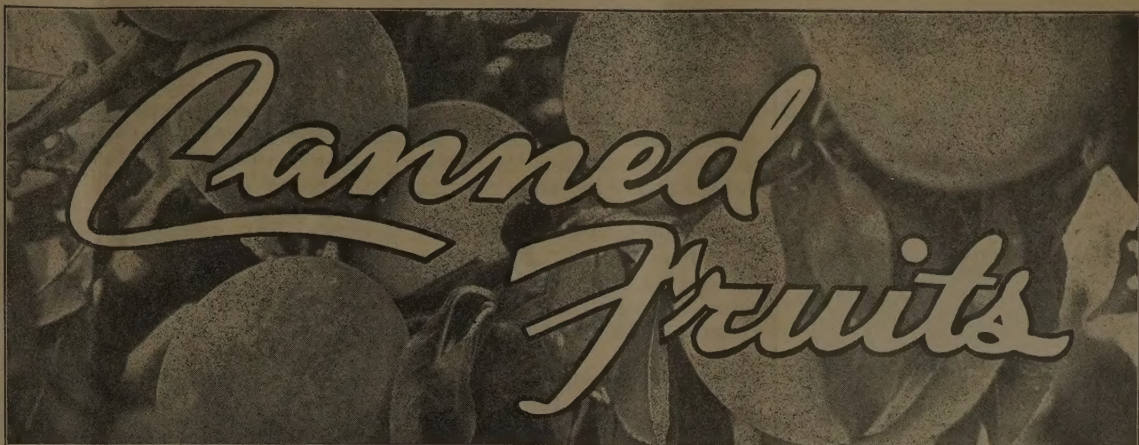
Heavy Grape and Peach Yield :: Stocks of Canned Fruit Sold to U.K. :: Higher Prices Needed for Growers :: Big Packs at Shepparton and Ardmona.

ANZAC DAY celebrations were carried out with great solemnity throughout the Goulburn Valley, and were attended by large crowds of people, and many beautiful wreaths of flowers were laid on the monument. Appropriate addresses were delivered by Mr. J. G. B. McDonald, M.L.A., at both the Shepparton and Mooropna services, and a special message was given by Cr. N. L. McKean, President, Shepparton Sub-Branch of R.S.S.I.L.A., in which he said: "While our thoughts are of those who sacrificed in other wars which this day commemorates, let our activities be to see that Australia provides our men on active service with everything that will make the best armed fighting forces in the battle area. Our individual job is to provide money, materials and comforts. Are we all sure we are doing our part?"

During the last five weeks the Goulburn Valley has had delightful Autumn weather, with little or no rain. The month has been a quiet one in the orchards; most growers have taken a well-

(Continued from page 8.)

1. Having lost all confidence in the Apple and Pear Acquisition Scheme, the Board of the Fruitgrowers' Federation requests its abolition as far as this State is concerned.
2. That while we recognise some form of control is necessary for the marketing of Apples and Pears, this Board is of the opinion that the present Acquisition Scheme has proved impractical of application.
3. That this Board is of the opinion that acquisition of Apples and Pears should not apply before the end of February each year and should cease to apply after the end of August each year.
4. That the Department of Agriculture be requested to review conditions of inspection of Apples and Pears in regard to dry stings and spray residue.
5. That this Board recommends that the same allowance for the costs of packing be given to both individual growers and packing houses.



earned holiday after a busy season.

The Grape season is almost finished for the markets, while large quantities were sent to the metropolis for distillery purposes.

Growers are particularly pleased with the sales of the entire pack of canned fruits.

Canned Fruit Sales. Surplus Bought by Great Britain.

The balance of Australia's exportable surplus of canned Apricots, Peaches, and Pears for the present season has been sold to the British Ministry of Food.

Mr. Anthony, Assistant Minister of Commerce, said that with 500,000 cases covered by a previous sale, a total quantity of about 1,300,000 cases, representing a return of more than £1,000,000 to canners in Australia, has been disposed of.

Complete clearance of the exportable surplus had placed the canned fruits industry in a very favorable position this year. As only sufficient supplies remained for the requirements of the Australian markets, it meant there would be no carry-over of unsold stocks into 1942.

Before beginning to process the 1941 packs, canners were faced with a likelihood of a heavy accumulation of unsold stocks.

After consultation with representatives of the industry, the Commonwealth Government agreed to finance the remaining 500,000 cases. That action enabled the full pack to be processed, and that was the fruit which has now been sold to the British Ministry of Food.

Higher Prices Needed for Growers.

Comment by Mr. W. Young.

Although the sale of the balance of Australia's export surplus of canned fruits to the British Ministry of Food has considerably alleviated the position of growers and canners, Mr. W. Young, President of the Northern Victorian Fruit Growers' Association, and Secretary of the Australian Canning Fruit Growers' Association, contended that growers would have to receive higher prices in the future if they were to remain on their blocks.

Invited to comment on the statement by the Assistant Commerce Minister (Hon. H. L. Anthony) regarding the sale of the surplus canned fruits, he remarked that the complete clearance had placed the canned

fruits industry in a very favorable position.

Mr. Young said that obviously fruitgrowers were very pleased that the pack had been sold. He added that the Australian Canning Fruit Growers' Association had made repeated representations to get the fruit sold, and credit was due also to Hon. J. McEwen, M.H.R., for the great help he had given in placing the growers' views before Cabinet, and supporting their efforts by his personal representations. Australian soldiers at the front would be certain to appreciate our canned fruits, while with stocks cleared and the bugbear of a carry-over removed, growers could look to the future with renewed hope. The canners' cry is always the fear of too large stocks, which they seem diffident of their ability to sell.

The attitude of the growers is that if the fruit is canned, it can be sold. Fruit which has been in the tins for five years is as good as, if not better than, when first canned. A bold policy of canning the fruit, even if it has to be kept in the store for a year or two, will keep the industry in existence.

Mr. Young said that he had received many messages of congratulation from growers

STANDARDISED SPRAYING MATERIALS

- ALBOLEUM
(White Oil Emulsion)
- ARSINETTE
(Lead Arsenate Powder)
- DRYMAC
(Derris Dust)
- COLLOIDAL SULPHUR
(In semi paste form)



This Trade Mark is
your safeguard.

- BORDINETTE
(Copper Fungicide)
- OSTICO
(Sticky Tree Banding)
- OVICIDE
(Tar Distillate)
- NICOTINE SULPHATE
(Guaranteed 40%)

Obtainable at all Fruitgrowers' Associations, etc.

Sole Manufacturers:—

WILLIAM COOPER & NEPHEWS (AUSTRALIA) PTY. LIMITED
9-11 O'CONNELL STREET, SYDNEY

throughout the Goulburn Valley and the Murrumbidgee Areas concerning the disposal of the pack. He remarked that it was the determination of the growers themselves which had contributed materially to the improved position.

Referring to the future, Mr. Young said that increased costs of production owing to the rising costs of spraying materials and almost every orchard requisite, together with increased labor costs, meant that fruitgrowers would have to receive a higher price if they were to continue in the industry.

Record Season at Shepparton Preserving Co.

Processing Finished.

The managing director, Mr. A. W. Fairley, indicated that although the quantity of Peaches processed would not be a record, the Apricots and Pears

would assist to swell the total output to a record figure.

In the last week, the cannery paid direct to its workers £5,600 in wages, a new record.

The number of hands employed this season has been higher than in any previous season.

Shepparton Preserving Company has donated £50 to the Defence League, which is a welcome contribution, and the Ardmona Cannery Employees have raised £92/14/- for Mooroopna Base Hospital. Despite many calls for other deserving causes, it is the proud tradition of the Ardmona Cannery employees never to forget the hospital. This magnificent response exceeds the total raised in last year's annual collection.

Ardmona Cannery Finishes for Season.

Factory Workers Celebrate.

There was a festive termination to a prosperous season

when employees of Ardmona Co-operative Cannery held a break-up celebration at the factory, and a successful ball. Speeches by the general manager, Mr. Monk, and the works manager, brought the festivities to a happy conclusion.

Obituary.

We regret to report the death of Mr. E. L. Young, at Mooroopna Base Hospital on Good Friday, aged 70 years. The late Mr. Young was one of Ardmona's pioneer fruitgrowers, and a most valued and highly respected citizen. Some years ago he filled the position of President of the Ardmona Fruit Growers' Association, and was one of the first directors of the Ardmona cannery.

He leaves an only son, to whom we extend deepest sympathy. His wife pre-deceased him eleven years ago.

CANNED APPLE SAUCE.

A contract with the Dominion Government provides for the conversion of 40,000 barrels of Apples into Apple sauce, a popular supplement to the Canadian menu. This follows a series of experiments to determine the feasibility and practicability of canning Apple sauce.

New machinery, specially designed for this work, has been installed at Berwick, Nova Scotia to process 75,000 cans per day. Gravensteins, which are largely grown in the Berwick district will be the main supply.

CANNING OF FOODSTUFFS.

AT THE CONFERENCE of the Associated Chambers of Agriculture held at Canberra at the end of April, the adoption by the Federal Government of an important new policy to meet Australia's possible loss of export markets during the war was foreshadowed by the Minister of Commerce.

Sir Earle Page said quantities of produce must be canned or dried so that they might be carried to the United Kingdom as ordinary exports, independent of refrigerated space, of which there was a serious shortage. Meat in particular must be canned, and Australia must produce large quantities of dried and preserved milk for the people of Great Britain. Because of naval needs, it might be necessary to curtail coastal shipping almost entirely.

The Government had therefore planned emergency storage to store and preserve perishable goods, the export of which was delayed beyond normal periods. Contracts for the sale of foodstuffs totalled more than £40,000,000. Practical illustrations of how Australian commerce was assisting the Empire war effort had been shown in the organisation of cold-store facilities.

Other matters dealt with included petrol restrictions, industrial unrest, national insurance, and the absorption of returned soldiers into industries after the war.

A new nectarine is advertised in this issue by Mr. G. L. Cole, of the "Rosalton" Nurseries, Tyabb, Vic. The name of this Nectarine is "P. Flood," it originated at Brighton, Victoria, and is stated to be of outstanding quality and market value. Mr. Cole advises that he has for sale well-grown trees worked from the original.

Teacher (to class): "Now, children, I want you all to draw a ring."

All the children did so except Tommy, who drew a square.

Teacher: "Tommy, I told you to draw a ring, and you have drawn a square. Why?"

Tommy: "Well, mine's a boxing ring."

BLACK APHIS

The BANDIT



Insect pests such as aphides, red spider and mites do not, unfortunately, ease off because there is a war on. They seem to be adding insult to injury, the bandits. The use of Gargoyle RED Spraying Oil in the dormant period is a sure safeguard, an insecticide of proved ability and a definite benefit to tree-health, and (another important thing—in these days of restricted supplies)—it is available everywhere.



VACUUM OIL COMPANY PTY. LTD.

(Incorporated in Australia)

Gargoyle RED Spraying Oil

Canning Peach Manurial Experiment

Five Years Results

Consistent Advantages Due to Sulphate of Ammonia

ANOTHER YEAR'S RESULTS are now to hand in connection with the canning Peach manurial trial being conducted on the property of Mr. C. R. Roper, at Kyabram, Victoria.

Here, in 1934, a block of 12 by 40, or 480 Pullars' Cling Peach trees, 14 years of age, were marked off into six blocks, each comprising four plots of 20 trees. It was desired to test the effect upon yield of sulphate of ammonia at two different rates, and also of potash. So that there might be no shortage of phosphate, 4 lbs. of super. per tree were applied over the whole area. The four treatments for comparison were:—

- 4 lbs. per tree of super. only.
- 4 lbs. super. plus 2 lbs. of sulphate of ammonia.
- 4 lbs. super. plus 4 lbs. of sulphate of ammonia.
- 4 lbs. super. plus 4 lbs. of sulphate of ammonia plus 2 lbs. of muriate of potash.

There being these four treatments and 24 plots, it was possible to repeat each treatment six times, and this was done at random over the whole area. Thus, outside effects due possibly to soil changes and differences in yielding ability due to individual tree characteristics, were reduced to a minimum.

Each August since 1934, each plot of 20 trees has received the fertilizer treatment chosen for it. Each Autumn, except that in 1937, when a wind storm intervened between the first and second pick, the yields from the inner six trees of each plot have been weighed and recorded.

The 1935 yield following the first application of fertilizers could not have been affected much by the latter and has therefore, though measured, not been included in the averages taken for estimation. Indeed, the figures at that time showed that the plots from which sulphate of ammonia was to continue to be withheld were initially higher yielders than any of the other groups, and thus possessed some initial advantage. The fruit was picked in accordance with color, and therefore each harvest extended over from 1 to 3 separate picks.

The following table shows the effect of the fertilizers in 1935 and subsequent years:—

Plots receiving:	Year.	T.	C.	Q.	L.
4 lbs. per tree super. only.	1935 ..	9	3	0	5
	6 ..	6	2	0	6
	8 ..	11	1	3	20
	9 ..	7	2	2	7
	1940 ..	6	8	2	26
	1 ..	10	3	3	6
Average =		8	3	3	7
Plots receiving:	1935 ..	8	13	2	19
4 lbs. super.					
2 lbs. sulphate of ammonia.	6 ..	7	1	3	16
	8 ..	12	12	1	15
	9 ..	8	6	1	13
	1940 ..	7	18	1	17
	1 ..	12	8	1	26
Average =		9	13	2	0
Plots receiving:	1935 ..	8	19	2	26
4 lbs. super.					
4 lbs. sulphate of ammonia.	6 ..	7	7	1	8
	8 ..	12	5	1	11
	9 ..	9	1	0	11
	1940 ..	7	18	2	5
	1 ..	14	2	3	7
Average =		10	3	0	3
Plots receiving:	1935 ..	8	9	0	14
4 lbs. super.					
4 lbs. s/ammonia.	6 ..	7	5	2	1
2 lbs. m/potash.	8 ..	13	0	0	23
	9 ..	8	18	1	21
	1940 ..	7	19	2	3
	1 ..	13	10	2	3
Average =		10	2	3	10

Taking into account the price received for Peaches in each of the years concerned and the corresponding cost of sulphate of ammonia, the average nett returns over the cost of fertilizer were as follow:—

Due to 2 lbs. per tree of S/A ..	£13 12 6 per acre
Due to 4 lbs. per tree of S/A ..	£16 15 9 per acre
Due to 4 lbs. of S/A and 2 lbs. M/Pot. ..	£15 2 9 per acre

Advantages of Sulphate of Ammonia for Peaches Confirmed.

There is no further need to stress the advantages, as revealed by this experiment, of from 2 to 4 lbs. per tree of sulphate of ammonia. Potash has so far shown no significant effect upon yield. Actually, the experiment is, amongst other things, only confirming the already established practice of many growers of Peaches under irrigation.

Perennial cropping of this nature aided by irrigation must be expected to cause a severe drain upon the reserves of nitrogen even in the most originally fertile soils. Sulphate of ammonia even at its present (war) price of approximately £17 a ton is still the cheapest nitrogen in fertilizer form procurable, and possesses the further advantage of being able to resist loss by leaching better than any other inorganic form.

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Importance of Green Manure.

Even with ample sulphate of ammonia in the Spring, however, orchard soils cannot continue indefinitely as highly profitable producers, unless replenished equally as amply with organic matter per medium of green or farmyard manure in the Autumn. Indeed, results from sulphate of ammonia itself may even suffer if the humus content of the soil is allowed to become very low. Therefore it is imperative to at least set about sowing some sort of crop between rows for incorporation as green manure. Over the whole of this experimental area at Kyabram, oats or barley has been regularly sown with the aid of 1 and 1 super. and ammonia, an invaluable fertilizer for such a crop. If peas or beans will grow satisfactorily, they are, of course, better still, and may not need sulphate of ammonia at sowing. The phosphate added to the soil as super. when sowing a cover crop, may be sufficient for the trees' annual requirements of that plant food, but whether sulphate of ammonia is applied in the Autumn or not, it must be given again in the Spring.

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Quantities of Sulphate of Ammonia for Application.

About 3 lbs. of sulphate of ammonia in the Spring is indicated as a good commercial rate for Pullars and probably for most Peach trees in full bearing, but large Apricot trees will require 4 or 5 lbs., whilst Pears repay handsomely even higher rates of expenditure still.

CANNED BERRIES FOR BRITAIN.

Canadian Factories Await Permits.

Berry growers in British Columbia are at present holding heavy supplies of processed berry fruits awaiting permits and transport for export to Britain. Practically the total pack of 1,500 tons of the 1940 crop is being held in cold storage pending shipment, representing about £75,000 worth of fruit. The berries are packed in 350 lb. barrels and, at the moment, some difficulty is being experienced to finance the delayed payments to growers. It is anticipated, however, that the British Government will eventually lift all stocks.

Citrus News and Notes

Citrus Investigations

Handling and Storage :: Evaporation of Water from Oranges :: Valuable Tests by C.S.I.R.

THE INVESTIGATIONS by the Council for Scientific and Industrial Research have been continued in Sydney, Griffith, Melbourne, and Adelaide, under the auspices of the Citrus Preservation Technical Committee on which the Council and the Departments of Agriculture of N.S.W., Victoria, and South Australia are represented. The main lines of investigation being carried out in the four centres are now as follows:—(1) Fundamental experiments designed to discover the nature and causes of the rind lesions appearing when the fruit is stored at low tempera-

tures. (2) Critical studies of the effects of various "sweating" treatments. (3) Pathological studies to determine whether some forms of rind lesions have a parasitic origin; also, critical studies of the factors governing the onset of septoria spotting in Oranges. (4) Studies of the processing of citrus fruits with a view to reduction of mould wastage and an improvement in the external physical condition of the fruit.

Investigations at Sydney in co-operation with the N.S.W. Department of Agriculture: The effect of various fungicidal

treatments on mould wastage in Washington Navel and Valencia Oranges has been further investigated; borax and Shirilan W.S. reduced wastage from *Penicillium*. The effect of various emulsions of wax, oil, and shellac on water loss is being studied, and further experiments are being planned to determine the effect of wax emulsions on wastage. Experiments on the control of storage spot wastage by preliminary high temperature sweating treatments have indicated that the effect of sweating is closely related to weight loss, but sweating to 3 per cent. moisture loss at 90 deg. F. has been more effective than sweating to the same loss at 70 deg. F. It is not certain whether this is due to the higher rate of evaporation at 90 deg. F., or to a direct temperature effect, or whether both factors contributed to the result. The effect of sweating is being investigated in more detail this year, and the relation between the amount of storage spot which develops in cool storage and the moisture content of the rind at the time of storage is also being determined.

Experiments with Emperor Mandarins have further confirmed previous findings that firm fruit is of better keeping quality than puffy fruit. Wastage caused by *Penicillium* attack was decreased by washing the fruit with borax and Shirilan W.S. solutions.

Investigations at Melbourne in co-operation with the Victorian Department of Agriculture: Experiments over several years on Victorian-grown Washington Navel and Valencia Oranges have given strong evidence that a storage temperature of 42 deg. F. is generally the most satisfactory in avoiding excessive development of mould and storage spot. This conclusion is not necessarily applicable to the storage of Oranges grown in other regions in Australia, and more data will have to be obtained before it will be possible to make a general recommendation covering all Australian-grown fruit. Apart from the storage temperature, careful handling and the avoidance of late picking (after mid-July for Washington Navels) are the main factors in keeping mould wastage at a minimum. The incidence of storage spot is generally less when the fruit is "sweated" after picking in the orchard before handling. Brytene emulsions have had no appreciable effect on the development of wastage. It is possible that "sweating" at high temperatures (70 deg. to 110 deg. F.) may have a more definite effect on spotting, and this is being investigated during the present season.

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Evaporation of Water from Oranges.

WILTING or "loss of condition" due to excess water loss sometimes results in considerable decrease in the market value of Oranges

CITRUS NEWS AND NOTES (Continued.)

in commercial handling, and work is being carried out to discover means of reducing this loss. The effect on the condition of the fruit of any given proportion of water lost varies to some extent with different samples or Oranges, but these variations seem generally to be small. As a rule, wilting becomes quite obvious when the water loss from the Oranges exceeds about 5 per cent. of the initial weight.

In most of the growing areas it is necessary to wash Oranges before packing for market. This washing is usually done in the packing houses in specially designed machines incorporating baths of some detergent solution, scrubbing brushes, drying tunnels, polishing brushes, and mechanical graders. A bath containing a fungicidal solution such as borax, and a tank for the application of wax emulsion, are sometimes included. It has been found that most of the detergent and fungicidal solutions in common use cause large increases in the rate of evaporation of water from treated fruit. With some of the detergents this increase may exceed 100 per cent. Thorough rinsing with clean water will eliminate or at least greatly reduce the adverse effect of the detergent solutions when the Oranges are carefully washed by hand, but it is by no means certain that rinsing would be equally effective in machine treatment.

The effect of rinsing in machine handling is now being studied. It has been shown that one of the long chain sulphonate detergents which is available commercially in Australia is an efficient cleanser and has no appreciable effect on the rate of loss of water from Oranges when used for washing by hand, but when it is used in one type of commercial machine there is some increase in the rate of evaporation from the Oranges though much less than with the detergent formerly in use. Tests are now in progress to determine whether this is a direct effect of the scrubbing brushes or whether the detergent solution also plays a part. It is possible that most of the detergents now in use have considerable fungicidal value, so that more work is necessary before it can be stated whether or not the adoption of rinsing or a change to one of the newer detergents is advisable.

After washing, Oranges are sometimes given a thin coating of a suitable wax to restrict evaporation, and improve the appearance of the fruit. Several of the relevant processes have been tested and shown to cause a restriction of the rate of loss of water of the order of 40 per cent. Most of the experiments so far carried out have been with Oranges stored in open trays, but some tests have been carried out with Oranges packed in cases. It was found that the outer fruits in the cases always behaved in the same way

as Oranges in open trays, but in cold store at 40 deg. F. with a low rate of air circulation the rate of evaporation from inner fruits was low and almost unaffected by previous washing or waxing treatments. In cases of fruit stored at 70 deg. F. with a fairly vigorous air circulation, the rate of evaporation from the inner Oranges was less than from the outer fruits, but the effects of washing and waxing treatments were only slightly less than in the outer fruits. The proportion of Australian Oranges which are held in cold storage between picking and marketing is not large, and even with cold-stored fruit the weight loss in storage is generally small compared with that during the remainder of the marketing period, so that the experiments carried out so far indicate that the effects of washing and waxing treatments on Oranges submitted to ordinary commercial handling will be slightly less than those observed under laboratory conditions. Further work on the effect of packing in cases is in progress.

IMPORTANCE OF BUD SELECTION.

K.R. Navel Oranges Being Tested.

THE IMPORTANCE of bud selection was recently stressed by Mr. J. L. Provan, Senior Horticultural Instructor, Victorian Department of Agriculture.

Mr. Provan has issued a progress report in which he states that the term "K.R." Navel does not denote a new variety of Navel Orange but a selected true type Washington Navel from Mr. C. H. Katekar's Grove, Renmark, S.A.

From Mr. Katekar's parent trees, others were propagated by the late Mr. Griffith, of the Two Bays Nurseries (Vic.). The strain was noted by Mr. J. A. Parkes, former general manager of the V.C.C.A. The parent trees are now 45 years old, and are worked on Sweet-Orange rootstock.

Selected buds were worked on Rough-Lemon rootstock and were distributed to growers in various parts of Victoria and S.A. Details have been kept of the diameter of the fruit grown in the various districts, weight in grams, juice percentage, rind thickness and rag, also activities. None of the progeny trees produce fruit with as high a juice content as that on the parent tree.

The marked effect of factors other than the hereditary make-up of the tree is shown in the total soluble solids content of the fruit from the progeny trees.

The external examination of these "K.R." strain Washington

Navel Oranges, as well as their chemical composition, indicate that the effect of soil, climatic and cultural practices may be more pronounced than is generally accepted. The effect of these factors, however, does not preclude the necessity for rigid selection of the best strains of the variety to be planted. One has only to visit the more re-

cently established groves and examine the type and quality of the fruit being produced on young trees to realise the importance of the bud selection practised during the past 15 or 20 years. Mr. Provan thanked the growers and the officers of the Department of Agriculture in S.A. and Victoria, for their assistance.

Maturity and Juice Standards for Oranges

AT A MEETING of the Board of the Fruitgrowers' Federation of N.S.W. held at Sydney in mid-April, consideration was given to maturity and juice standards for Oranges.

Following a conference of interstate Citrus Conference at Adelaide recently, correspondence from the Victorian Central Citrus Association was considered in which amendments to the existing maturity and juice standards were suggested. The Conference at Adelaide had decided that the various State Departments of Agriculture should be requested to amend regulations in relation to these matters as follow:—

- That the maturity standard for acidity be altered in co-operation with other interested State Departments, to provide that, instead of the neutralising figure for 10 ccs. of juice being 26 ccs. N/10 soda, it be 24 ccs., with a tolerance of 26 ccs. to be allowed at the discretion of an inspector, as from May 7.
- That the minimum juice content be altered from 30 per cent. to 33 per cent.

A letter was also considered through the Chief of the Division of Horticulture, N.S.W. (Mr. Savage), in the following terms:—

- "I have received a communication from the Superintendent of Horticulture, Victoria, in relation to maturity and juice standards for Oranges. These standards have been considered by the V.C.C.A. and the Citrus Association in S. Aust., and it is understood that the V.C.C.A. has written to your Federation asking that consideration be given to the proposal.

"I might state that after consultation with our Special Fruit Instructor in Citrus Fruits, I am of the opinion that the present standards are

too low and that we could with advantage raise the standards in this State to provide for a maximum of 24 ccs. of N/10 soda being required to neutralise the acidity of 10 ccs. juice. This will tend to keep off the market some of the more acid fruits in the early part of the season.

"It is also desirable that the the marketing of very dry Thompson Navels and frosted Oranges which are having a detrimental effect on the sale of high quality fruit."

After due consideration, the Board decided that the suggestion made at the Adelaide Conference appeared practical of application at an early date, and it was decided to advise the V.C.C.A. of the Board's agreement to its proposals, rather than to the suggestions made by Mr. Savage.

Coloring of Citrus and Ethylene Gas: Advice was received that all stocks of ethylene gas had been acquired by the Defence authorities for medical purposes, and, in consequence, supplies of ethylene for coloring of citrus were not available. The Board decided to request the authorities concerned to release sufficient supplies of ethylene for coloring of citrus during the coming season.

(Citrus Notes continued on page 23.)

"I've had to keep that car in the garage ever since the day I bought it from you. The thing won't go."

"Well, sir, you remember you said you wanted a car that wouldn't use much gasoline."

He: "I don't see why this tandem should seem so hard to pedal."

She: "Well, the only thing I don't like, dear, is the way these foot rests keep moving up and down."



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Production of Pome Fruits (Continued from Page 6)

While the control of this trouble can be so simply brought about, the cure is not "fool-proof," for if excess applications are made severe damage may be done to the trees. In the Kentucky area where even 1 lb. of borax per tree was applied to some trees which were in moderately weak condition, during a droughty period, leaf burning and dying back of shoots occurred. In the orchard at the New England Experiment Farm, Glen Innes plots of trees were given soil applications of from 2 ozs. up to 5 lbs. of borax per tree, severe damage has resulted from the heavier applications. The trees did not show the damage in the first two years after application, but in the third year the leaves became scorched and the vitality of the trees was severely impaired.

Annual dressings even of a light nature are not recommended, as the accumulative effect after a number of years may have serious results on the health of the trees. It is interesting to note that trees to which 1 lb. of borax was given four years ago and have not received a further dressing since, are still in good health producing crops of healthy fruit without a sign of internal cork being apparent.

Young trees do not show any signs of weakness through boron deficiency until they commence to come into heavy bearing, therefore, until the trees are about five years of age borax should not be applied to the soil.

The application should then be only about 4 ozs. to the tree, and it is desirable to spread the borax around the tree, about 3 feet from the butt. For older trees, the application should be from $\frac{1}{2}$ lb. to 1 lb. per tree. Further applications should not be given until signs of the recurrence of internal cork is noticed. At the present time we are not in a position to advise how long the one dressing of borax will be effective, for, as previously stated, trees to which 1 lb. of borax was applied four years ago are still producing healthy fruit. These trees were some of the first to which borax was applied in the Kentucky Settlement.

The major disorder of Pears found in the Kentucky district is also due to deficiency of boron, the results from the application of borax to the soil is not as rapid as in the case of Apples, and it is usually two years before the full effect of the borax applications are noticed.

The Small Jonathan Apple.

One of the drawbacks in the production of Jonathan Apples in parts of the New England District is failure of much of the fruit to "size-up." Several reasons have been advanced for this failure, but it is probably due to the failure of the grower in most cases to carry out one or more cultural practices.

The lack of tree health in the first instance is one of the main causes, especially as the trees age, and this weakness has often been brought about by growers

failing to take proper precautions to control powdery mildew. Too strong an emphasis cannot be laid upon the necessity to remove all infected wood during the Winter pruning, carelessness in this connection is only seeking disaster in the coming growing period. The applications of sprays for the control of the fungous should be assiduously carried out. The spraying with lime-sulphur at the "spurburst" stage should be the first treatment in the season, further applications are given with the arsenate of lead applications for the control of codling moth.

More attention should also be paid to pruning, too often this work is slummed. The Jonathan usually spurs freely, and the spurs subdivide each season, if these subdivisions are not judiciously thinned out they become overcrowded and weak and satisfactory fruit development cannot be expected. Heavy thinning out of extended and massed spurs is strongly recommended.

Because heavy pruning of the spurs is advocated, the reduction of the leaders back into old wood is not recommended, unless the cut can be made just above where a strong lateral has developed. The reduction of the leaders is only necessary on weak trees or thin leaders. If the tree is growing satisfactorily, heavy pruning of the leaders is not desirable.

Thinning of the fruit may also be necessary where heavy crops have set, this should be carried out as early as possible in the season soon after the natural shedding has taken place.

The quality and size of Jonathans on young trees throughout the district is excellent this season, though on many of the older trees where proper care has not been exercised, much of the fruit will not reach the stipulated size of $2\frac{1}{2}$ in. diameter.

Control of Insect Pests.

Satisfactory tree health and the production of high quality fruit cannot result unless every care is taken to keep such insect pests as San Jose scale, jassid, codling moth and fruit fly under control.

In the control of San Jose scale, trees may be sprayed in the dormant period with a mixture of pale oil sprays and lime-sulphur, of one gallon each with water to make up to twenty gallons.

Jassid, or the Apple leaf-hopper, can be controlled by spraying the trees in early Spring with a spray consisting of 1 pint nicotine sulphate, plus $1\frac{1}{2}$ lbs. hard soap in 75 gallons of water. Two applications are recommended, one just before the hoppers have reached the winged stage, and another three or four weeks later. The lime-sulphur sprays for the control of powdery mildew during the Summer months will also assist in controlling jassid.

The codling moth sprays of lead arsenate of 24 ounces of powder to 50 gallons water commencing as soon as the majority of petals have fallen from the

flowers and followed at three weekly intervals until the fruit is harvested, are well known to all growers. Too much stress cannot be laid on the necessity of destroying as early as possible all infected fruit. The value of the Winter "clean-up" is not often realised, the overwintering grubs in the crevices and under the bark of the trees should be destroyed, as should also the grubs harboring in picking boxes and in packing sheds. This very important work should be carried out before the end of August.

If proper precautions are taken in trapping and applying of poison foliage sprays and the destruction of all infested fruit as soon as it is detected, the control of fruit fly can be brought about.

Cold Storage.

The successful storage of Apples depends not only on the way a cool store is operated, but also upon the quality and condition of the fruit placed in the stores.

It is known that certain varieties of Apples have a longer storage life than others, but even Apples of the long-keeping types vary considerably in keeping qualities.

Apples from young trees or from older trees carrying light crops should not be held for long storage, as the flesh is somewhat soft and will not stand up to extended periods in store. Fruits from moderately heavy to heavy crops on mature trees have the longest keeping life and, therefore, should be selected for long storage.

The moderately sized Apple of the better commercial sizes are the best to store, the larger Apples tend to break-down more rapidly.

Granny Smith Apples, unless properly handled, will scald badly. This variety should be held in common storage for two weeks, then wrapped in oil wraps before being placed in cold store.

In handling Apples, great care should be taken in order to prevent bruising during picking, carting and packing. Damaged fruit may soon decay and cause sound fruit to rapidly deteriorate.

There were 35,900 acres under Lettuce in the late Lettuce States of California, Idaho, New Jersey, Oregon and Washington last year, an increase of 10 per cent. over 1939.

U.S.A. produced over 383,000,000 bushels of Potatoes last year, which was 19 million increase over 1939 and 17 million bushels over the average for 10 years.

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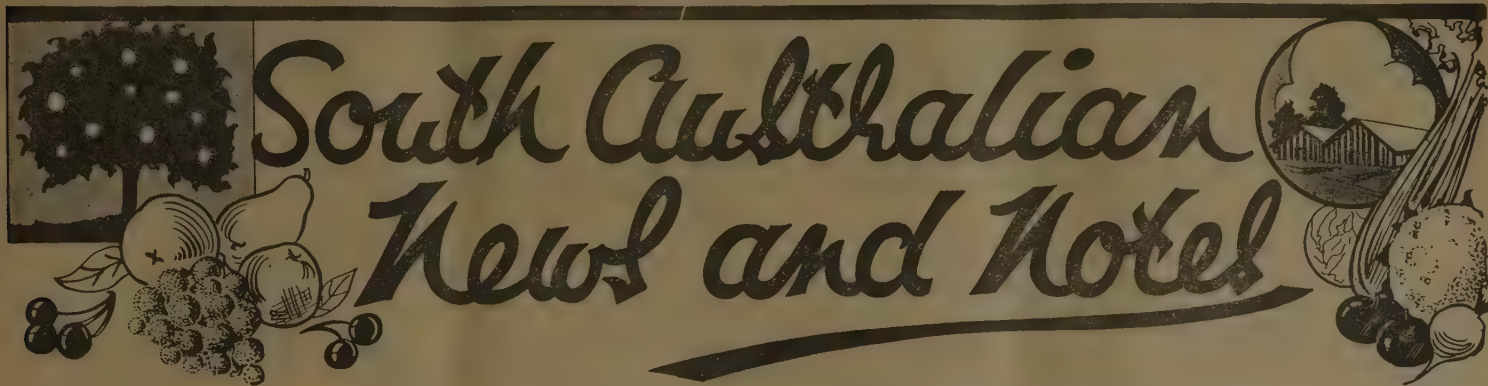
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Official Report and Notes of the South Australian Fruitgrowers' and Market Gardeners' Association

The South Australian Fruit Marketing Association, Inc.

MEETING OF EXECUTIVE COMMITTEE.

THE Executive Committee meeting of the S.A. Fruit-growers' and Market Gardeners' Association Incorp. was held in the Board Room, 288a Rundle-street, Adelaide, on Wednesday, April 30, at 10.30 a.m.

The President (Mr. H. N. Wicks) presided over the meeting, which was poorly attended owing to the change of meeting day occasioned by the Anzac Day holiday.

Members present were: Messrs. J. Turner, C. J. Pitt, L. J. Wicks, N. T. Hobbs, L. B. Pfeiffer and C. H. Ragless.

Apologies received from Messrs. W. H. Ind, F. A. Wicks, J. B. Randell, R. A. Cramond, W. J. Bishop, N. Edwards, H. W. Parsons, M. Packer, C. Stanford, L. G. Pethick and A. G. Strickland.

Minutes of March meeting read and confirmed.

Correspondence: Letter from Chief Horticulturist seeking the opinion of the Association as to introducing legislation to control a certain type of bushel case recently used in local markets.

Mr. L. J. Wicks moved: "That in the opinion of the meeting the position at the present moment is more satisfactory and legislation at present is not favored." Seconded Mr. N. T. Hobbs. Carried.

Australian Labor Party: Letter from Australian Labor Party in acknowledgment of Associa-

tion's letter concerning Apple prices.

Sectional and Branch Reports.

Apple and Pear Section: A general discussion on acquisition took place.

Celery Section: Mr. N. T. Hobbs reported that at present markets were a bit over-supplied. The crate position through labor shortage was also causing some concern.

Tomato Section: The Secretary reported that nominations for the six constitutional vacancies had been called and the retiring members had been returned unopposed.

Citrus Section: Mr. L. J. Wicks reported that the market for late Valencias was satisfactory, but the coming season crop promised to be generally light.

Potato Section: Mr. C. J. Pitt stated that he did not attend the Brisbane meeting of Federal Potato Advisory Committee on April 21, and had not as yet received minutes of the meeting.

Onkaparinga Potato Branch: Mr. L. B. Pfeiffer stated the branch was preparing a scheme for stabilising the price of potatoes in S.A. and the Committee had met representatives from the Merchants' Association to discuss the matter.

A general meeting of the branch held at Woodside on April 9 was exceptionally well attended, and various matters pertaining to the industry had been discussed.

Fruitgrowers' Society: The Secretary stated that the Society's trading figures for March constituted an all-time record.

General Meeting of Onkaparinga Potato Branch of S.A. Fruit-growers' and Market Gardeners' Association Incorp.

BETWEEN 40 and 50 potato growers attended a meeting of the above branch at Woodside on Wednesday, April 9.

Discussion took place on the various problems in the industry, and the chairman (Mr. L. B. Pfeiffer), in his report, stated that the Committee had met monthly, dealing successfully with various matters. New members were being continually enrolled, and, with greater membership, much more work could be done.

During a discussion on the low price being received for best great market potatoes, some useful suggestions were brought forward, and, in commenting on this subject, Mr. H. H. Shannon, M.P., said that such a position was often brought about by lack of organisation, some growers being forced to sell resulting in a cut price often to such extent as below production costs. To rectify this was an industry matter. Organising was always a difficult matter, and any improvement scheme of a voluntary nature was of no use. If the branch could reach a unanimous decision no doubt suggestions from it could be put into

legislation which would assure a fair deal on a sound basis without price cutting.

Mr. E. W. Nitschke gave an interesting description of a recent trip through Victorian Potato Districts. He stressed the need for a sound seed certification scheme in this State, such as the one which was being conducted by the Department of Agriculture.

A number of questions were dealt with by Mr. A. G. Strickland (Chief Horticulturist), and Mr. Adams (of the Waite Research Institute). Mr. Strickland congratulated the branch for starting a seed certification scheme which he hoped would continue to grow. Certification, he said, broadly consisted of keeping the strain free from foreign varieties and diseases by rogueing and periodical inspections by Department Officers certainly being the most important factor.

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Trade Supplier of Standard and Threequarter Standard Roses

South Australia (continued)

APPLE WEEK IN ADELAIDE

DURING the week, April 21 to 26, an Apple Week was conducted in Adelaide.

More than a dozen large city firms co-operated with the Apple and Pear Board in its effort to publicise the drive, and some of the finest Apples ever grown in South Australia were on display in the city and suburbs in an effort to stimulate the demand for one of the most nourishing fruits produced in the State.

In a special message from Sydney for the opening of the week, the Premier (Mr. Playford) said: "The war has disrupted many of our exporting industries. Shipping difficulties have naturally affected the marketing of Apples and Pears, of which in normal times several million cases were exported annually. It is therefore essential that some action should be taken to assist this industry. If the Australian consumers will purchase extra quantities of Apples they will materially assist the authorities in the solution of what is admittedly a difficult problem, while they will also directly benefit from a healthy fruit diet. This week let our slogan be 'Apples for Health'."

City shop windows during the week made attractive displays

of Apples, together with posters and window stickers advancing the health qualities of Apples and Pears.

A display in the window of one prominent city shop showed Apples grouped in their separate varieties with the culinary uses to which each variety may be put. These were surmounted by the slogan "Do you know that you can prepare a different dish for every day of the month." An attractive recipe booklet, prepared by the Apple and Pear Board was widely distributed during the week, and a strong demand for this booklet still prevails.

Firms made the displays without any cost to the Board.

An interesting feature of the drive will be the probable use within a few weeks of cardboard cartons of half case and quarter case size, which it is hoped will appeal to housewives who do not wish to order a full case, yet who find the customary paper bag purchase inadequate.

This innovation comes from Victoria, and is already in successful operation there.

Another interesting innovation was the selling of Apples,

by some firms by the count instead of the usual custom of by the pound.

As a practical result of the week, sales in South Australia have been estimated as an all-time record by the State Superintendent of the Australian Apple and Pear Marketing Board (Mr. P. R. B. Searcy). Although returns are not yet complete, Mr. Searcy believes that the figure for Apple Week will total about 25,000 cases, compared with the previous "high" of 20,000 cases recorded for the preceding week.

Largest number of cases sold in South Australia in any previous week is estimated by Mr. Searcy at about 15,000. Reasons given for the larger weekly sales are increased publicity, more attractive fruit, and lower prices.

Free Apples for 35,000 school children. An "Eat more Apples" campaign is in progress at State Schools throughout the Metropolitan area. Under an arrangement with the Apple and Pear Marketing Board, the Government was paying the cost of delivery of 1,200 cases of Apples a week to these schools, permitting each of the 35,000 children attending them to receive an Apple each school day. The scheme would be continued so long as supplies of Apples were available.

South Australian Fruit Marketing Association

Meeting of Executive Committee

Minutes of monthly meeting held at Adelaide on May 2, 1941, at 2.45 p.m.

Present: Messrs. S. M. James, R. G. Hannaford, R. O. Knappstein, R. B. Pritchard, G. Quinn, L. G. Heading, L. J. Bishop, and the Secretary.

Apologies: Messrs. A. G. Strickland, M. G. Basey, F. F. Redden, A. O. Petersen, P. R. B. Searcy, J. H. Dunning.

Growers' Sub-Committee: Mr. S. M. James reported that at the meeting of the growers' sub-committee a general discussion took place on various garden problems, and different phases of the acquisition scheme.

Apple and Pear Board Joint Committee: Mr. L. G. Heading drew attention to the fact that the Joint Committee appointed by the Federal Government to inquire into the Apple and Pear Acquisition Scheme would be visiting South Australia in the near future, and he suggested that the Association should take steps to see that proper evidence, in the interests of this State, should be set before this Committee.

After lengthy discussion it was agreed that the Secretary should write to the chairman of the Joint Committee and ask when the Committee will be in Adelaide and whether there is any special information the Committee would like this Association to obtain. A full meeting of the Executive Committee to be called prior to the meeting of the Joint Committee in Adelaide to discuss the position, and decide what arrangements should be made by the Association for giving evidence before the Committee, covering various phases of the industry in South Australia.

The South Australian Fruit Marketing Association Inc.

Growers' Sub-Committee.

Minutes of monthly meeting of members held at Adelaide on May 2, 1941, at 1.45 p.m.

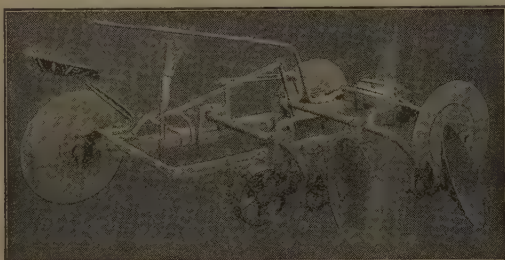
Present: Messrs. R. O. Knappstein, R. B. Pritchard, S. M. James, J. B. Randell, G. Quinn, and the Secretary.

Apologies: Messrs. M. G. Basey, A. O. Petersen, F. F. Redden, A. G. Strickland. Mr. S. M. James, acting chairman, occupied the chair.

General Discussion: General discussion took place dealing chiefly with spraying, the prospects of codling moth infestation next season. In the opinion of members there was every prospect of codling moth being bad next season, but it was largely dependent on weather conditions.

Various phases of the Acquisition scheme were also discussed.

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THE SOUTH AUSTRALIAN FRUIT MARKET-ING ASSN. INC.

May Meeting.

The May meeting of the Association will be held at the Secretary's office, 83/4 Brookman Buildings, Grenfell-street, Adelaide, on Friday, May 30, 1941. Growers' Sub-committee commencing at 1.45 p.m. Speaker Mr. H. N. Wicks.

Subject: "Affinity of Varieties."

Executive Committee Meeting will commence at 2.45 p.m.

E. WHITFIELD MILLS, Secretary.

PROPOSED TOBACCO BOARD.

Approval of the proposal of the decision of the Federal Government to set up a Tobacco Board was recently expressed by Hon. J. McEwen, M.H.R., Minister for Air. He expressed the hope that there would be a considerable expansion of the tobacco industry in Australia.

At a cost of £3,000, the Tasmanian Government is distributing an Apple a day to school children for 12 weeks; 20,000 cases of Apples will be thus utilised. The Minister for Education, Mr. Cosgrove, in addressing children, emphasised the value of the Apple for health, and spoke of the importance of the industry to Tasmania.

R. Werner and Co. Pty. Ltd., refrigerating engineers of 54-86 Burnley-street, Richmond, Vic., advise that their sole agents for New South Wales are Stuart Walker and Co. Pty. Ltd., 174 Clarence-street, Sydney.

PATENTS
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PATENT ATTORNEY
HEATHY HOUSE, 499 LITTLE COLLINS ST.
MELBOURNE.

Potato Culture

(H. H. Orchard (Horticultural Adviser) in the S.A. Journal of Agriculture.)

(Continued from page 19, December "Fruit World and Market Grower.")

Cultivation After Planting.

Thorough cultivation of the potato field is essential to promote favorable growing conditions, maintain surface tilth, and control weeds.

The first cultivation, a harrowing, should follow each day's planting to level the ground after the plough and reduce evaporation. Then at frequent intervals, and especially after rain, use the harrows to maintain surface tilth and destroy young germinating weeds which would otherwise compete for the available soil moisture and plant food. Early suppression of weeds benefits the growing crop and facilitates subsequent working of the land. Provided reasonable care is exercised, and the soil only lightly stirred, the harrows may be used until the potato plants are several inches in height. Onwards from this stage, however, the horse-hoe supersedes the harrows and cultivation is confined to the space between rows. A Planet Junior type of cultivator is a suitable implement for this work.

The number of horse-hoeings given is determined by such factors as the type of soil, frequency of rain, irrigation, and the degree of weed control achieved by the early harrowings. Heavy soils generally require more working than light soils; cultivation should follow rain and irrigations, and weeds must be eradicated. As the season advances and the roots and tops of the potato plants spread, the width and depth of the hoeings will lessen.

The inter-row cultivation period also provides an excellent opportunity for the grower to locate, remove, and destroy stunted and sickly plants, which are probably virus infected and a potential source of danger to the balance of the crop. Plants of this type seldom produce

marketable tubers, and never give rise to productive seed.

Normally, cultivation should cease when the plants are at, or approaching full bloom, and the ground between the rows shaded by the spreading foliage. This period generally coincides with that of tuber setting.

Moulding.

The final cultural operation should be that of moulding, or hilling, whereby the soil is banked back, but not steeply, against the potato plants. This operation should be completed not later than the full flowering stage. The extreme type of moulding should be avoided.

Moulding serves a twofold purpose. By providing a mound of loose earth the growing tubers are protected from sunburn and the possible depredation of the potato moth (*Lita solanella*) are greatly lessened. With level cultivation there is a greater tendency for the surface soil to crack, especially during a dry season, providing a ready means of ingress for the moth to lay its eggs on the exposed tubers, and commence an infestation which might be responsible for serious losses. Greening, by exposure to light, while desirable in the seed potato, is detrimental to the table potato. Moulding should be a regular practice of potato culture.

Irrigation.

To enable the potato plant to make continuous, strong growth and retain the typical foliage color of the variety, the soil moisture must be maintained, and often this can only be achieved by supplementing the rainfall. Low soil moisture is frequently a limiting factor to high yields. Potatoes should not, in fact, be planted under dry conditions, and where such conditions do prevail, in the absence of rain, and water is

available for the purpose, the land should be flooded, cultivated as soon as workable, and then planted without delay.

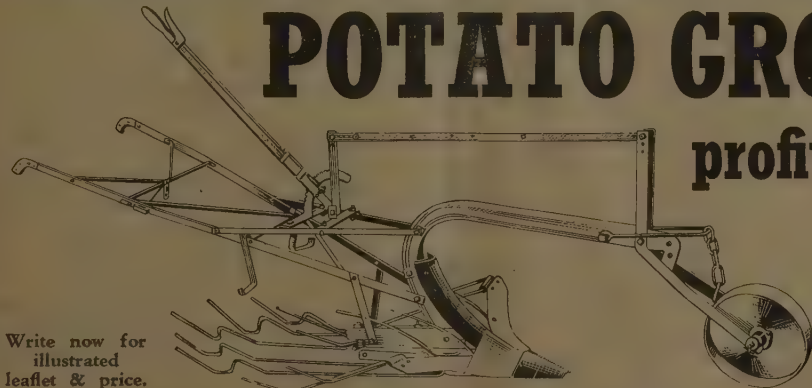
Irrigation water may be applied by sprinklers attached to hoses or moveable pipes, but preferably should be run down between the rows after the horse-hoe has banked the soil back towards the plants. The water should be confined to the rows, which for satisfactory irrigation should not exceed five chains in length. The flow of water along the row is governed by the soil type and the contour of the land, but the water must be allowed to percolate slowly through the soil to the roots. The heavier soils generally absorb moisture at a slower rate than sandy soils, and the rapid movement of water down a slope is likely to be harmful to both soil and plants.

The requisite number of irrigations will vary according to district and season. On the Adelaide Plains, for instance, where the annual rainfall is approximately 21 in. and the evaporation ratio high, potatoes are watered at least fortnightly. In parts of the Mount Lofty Ranges, where the annual rainfall is over 30 in., usually only two waterings are given, while further south, where the annual rainfall is in the vicinity of 25 in., three and sometimes more are given.

The first watering is given about a fortnight after emergence of the plants, and the final one at flowering time. It is possible by earlier application detrimentally to affect sprouting, and by later application to cause second growth and adversely affect the quality of the potatoes. Any additional waterings would be applied between the times mentioned, although, when dry conditions prevail near digging time, a light watering may be given to reduce the incidence of the potato moth damage.

One acre a day is considered satisfactory progress under general conditions of irrigating potatoes, but much depends on the head of water and the type of soil. The cost of applying the water, governed largely by the pumping equipment required, has been computed by experi-

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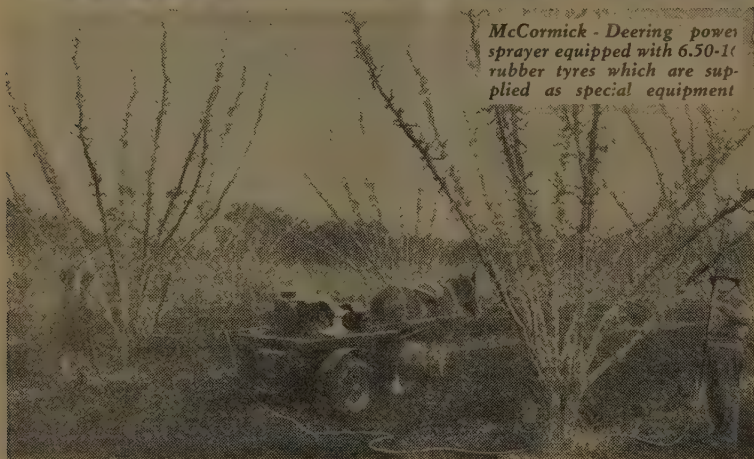
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sprayer equipped with 6.50-16
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THE McCormick-Deering power sprayer is designed and built for efficient and economical application of all kinds of spraying mixtures. It can be supplied with either steel wheels or pneumatic tyres.

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kerosene engine. Outstanding engine features include automatic lubrication, high-tension magneto with impulse starter, variable engine speed hand-control lever, and anti-splash hopper. Spark plug, and all engine working parts are completely enclosed and protected against dust and spraying mixtures. A sturdy full-length axle keeps wheels in true alignment and maintains the light draught of the outfit.

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POTATO CULTURE—(Continued.)

enced Hills growers at £1 per acre per application.

While it is essential to maintain soil moisture, it must be remembered when irrigating that overwatering will affect the quality of the potatoes, while irregularity may cause second growth.

Digging.

The period of digging is naturally controlled by the variety and the date of planting, but the exigency of the market is often an important factor which influences the time of harvest. Furthermore, climatic conditions and cultural operations have a bearing on the date of ripening.

Early potatoes are frequently dug in immature condition to catch the market, and the digging of late maturing crops may be delayed in expectation of an improvement in the market. Frosts will retard the growth of the plants and extend the growing period, while heavy rains may necessitate digging somewhat prematurely to save the tubers from rotting in the ground.

The normal growing period extends over a period of from 15 to 20 weeks from time of planting to time of digging.

Potatoes are ready to dig when the tops have died off naturally, as distinct from dying off due to disease, and when the skin of the tuber is firm and does not readily rub when slight pressure is applied.

The hand fork is customarily utilized for digging, and care is necessary to reduce fork mutilations to a minimum. Mechanical diggers are seldom used in South Australia.

After digging, potatoes should be bagged and sewn without delay. Freshly dug tubers are liable to sunburn and infestation by the potato moth if left for any time on the surface soil. Failing immediate sewing, the open top of the bag should be protected by an empty sack, and not covered with potato haulms, a faulty practice, which may lead to increased potato moth damage.

The second-hand sacks used as containers should be sound, clean, and free from foreign brands, and usually 15 sacks are required for 1 ton of tubers.

Careful digging and handling of tubers is important as losses in storage from decomposition are frequently the result of careless digging and handling.

Grading.

Grading for market is generally effected in the field at the time of digging, and probably for this reason mechanical diggers are not in general use. Field grading can be quite efficient if done by reliable, skilled men working consistently to a uniform standard. The practice entails less handling of the potatoes, and, therefore, lowers the cost of marketing.

Grading involves the elimination of potatoes showing signs of disease, greening, mechanical injury, second growth, and bad

shape; tubers are also sized approximately. The average market requirement is for a reasonably uniform potato, of medium size, clean and sound. Large potatoes, invariably associated with wide planting and heavy yields, are not desirable.

Storage Hints.

Table potatoes which are to be held for some time should be free of soil, diseases, and mechanical injuries, and stored in a cool, dry environment. Cold storage, cool well-ventilated sheds, and pits are utilized for the purpose, with probably the latter in most general use.

Cold storage, as with seed potatoes, is an efficient means of holding, but is not always readily available. A cool, well-ventilated shed is suitable, and should be a permanent structure where storage is a regular annual practice. A storage pit is more adapted for temporary use, and, while simply made, care needs to be exercised if the potatoes are to open up in good condition. The site selected for the pit should have good drainage, the pile should be about 6 ft. wide and not exceed 5 ft. high, and good ventilation at the top is essential.

The simplest form of pit may be constructed by ploughing two parallel furrows the required distance apart and throwing the sods inwards to form the sides of the pit. The open furrow remains on the outside. The ends are constructed in a similar manner with a spade. A layer of clean, dry straw is then placed on the ground between the furrows, and the potatoes built up on this with the sides of the pile as steep as possible to assist in running off rain. Straw and earth coverings, sufficient to protect against light and frosts, follow to complete the pit. Openings should always be left in the ridge at the top of the pile for ventilation, but these may, if necessary, be covered.

Pitted potatoes probably retain their quality better than those stored by other means.

Competitions.

Potato growing competitions serve a useful purpose in a district, and the keen, friendly rivalry engendered by such competitions is in the interests of the industry. Under the auspices of the Agricultural Bureau, competitions have been conducted in different potato growing areas of the State, and usually an improvement in methods, and consequently yields, has been apparent as the competitions progress. The schoolboys' competition, sponsored by the Mount Compass Branch of the Agricultural Bureau, has served a double purpose. The phenomenal yields obtained have helped to advertise the district, and the boys have been encouraged in a practical manner to take an interest in a rural pursuit closely linked with their district.

[Further articles on this subject will be printed in a later edition.]

APPLE AND PEAR ACQUISITION

Big Developments in Drying and Canning :: Parliamentary Enquiry

THE HANDLING of the 1941 crop of Apples and Pears under the control of the Apple and Pear Marketing Board is steadily proceeding. The work is of considerable magnitude.

Problems are being met as they arise, including those relating to the short life of large sized Jonathans and shipping difficulties from Tasmania to the mainland.

Apple By-Products

Dried and Canned Apples, Apple Juice and Cider, Apple Vinegar and Concentrates.

MORE THAN DOUBLE the normal output is the expectation for evaporated Apples this year. Not only is this a very valuable contribution to the absorption of fresh Apples, but is an emphatic response to sudden calls made by the Imperial authorities for supplies for the services abroad in quantities exceeding the normal total of Australian output. The Australian Apple and Pear Marketing Board has contracted to purchase hundreds of tons of dried Apples which conserve shipping space enormously as their weight is about only one-eighth of that of the fresh fruit.

The arrangements crystallise plans developed by the Australian Apple and Pear Marketing Board in conjunction with the Department of Commerce. This phenomenal expansion is possible only with the initiative and energetic co-operation of both the operators and employees of evaporating plants throughout Australia, the majority being located in Tasmania.

This expansion is dependent upon increased output of existing or readily available equipment, both of kilns and dehydrators, and particularly of peeling and coring and slicing machinery; although some machines have been imported by the Board to assist in this expansion, and in the output of canned Apples.

Enterprise has been shown in many aspects of the development, an instance being the conversion in Western Australia of a berry drying plant for use for Apples.

The supply of fresh Apples for drying involves very special organisation and planning, particularly as almost

half a million bushels are required and must be available through to October if the maximum output is to be gained, while all the limited cool storage space available is required for Apples and Pears for public consumption. Some further idea of the operation may be gained from the fact that over 70,000,000 Apples will have to be handled individually through the plants concerned.

Further very substantial quantities of Apples will be required

for canning, and all plants equipped for this work are expected to operate to capacity as a large proportion of this output is required for the Services.

Other by-product outlets have been the subject of detailed examination and stimulation as a result of the work of the Board in conjunction with the Department of Commerce and the Council for Scientific and Industrial Research. Production of Apple juice and cider has been assisted by the Seal of Quality scheme; absorption of Apples for sauces, vinegar and other standard lines has been extensive; the possibilities for development of production of pectin and various concentrates, spreads, Apple butters and treacles, and so on, are most promising, although the outlook for other outlets examined and which have found favor abroad, such as Apple brandy and Apple jack, appear less favorable here.

GARDEN WEEK IN MELBOURNE.

Garden Week, which was held in the Alexandra Gardens, Melbourne, from March 27 to April 5, attracted many thousands of visitors.

The function was opened by the Lord Mayor, and seven large marquees were erected to stage the displays. Additional features this year were the three days' Dahlia display and a special Grape display.

The Apple and Pear Marketing Board put up a delightful display, which won much favorable comment. Children, numbering 6,000, from the metropolitan schools, received Apples when they visited this stand. Health literature was distributed.

IN LIGHTER VEIN.

Wife: "Didn't you say it was very warm at the baseball game, Henry?"

Henry: "Yes, dear, I did."

"I don't understand that, this newspaper says that fans filled most of the seats."



Display by Apple and Pear Marketing Board at "Garden Week," Melbourne, in April.

Apple and Pear Board Enquiry

When the enquiry into the operation of the Apple and Pear Marketing Board by the Joint Federal Parliamentary Committee opened in Sydney on April 23, the Secretary of the Department of Commerce, Mr. J. F. Murphy, said that the loss to March 31, 1941, was £582,671. Expenditure to that date totalled £2,994,258, including advances to growers of £1,421,043; presentation and marketing costs of £1,486,754; administrative expenses of £74,724; and publicity £12,737. Total proceeds from sales during the period were £2,411,587.

At Sydney the General Secretary of the N.S.W. Chamber of Fruit and Vegetable Industries (Mr. P. S. Macdermott) said the Board had rendered useless the avenues and outlets which the agents had built up, and sales had suffered accordingly.

Mr. A. Weymark, fruit exporter and distributor, condemned the acquisition plans. There was heavy waste in cool stores last year. Growers were not interested in the fruit after it was acquired, and there was no pride in the packing. Trade channels had been disrupted. As an alternative the Federal Government should buy the export surplus of about 4,500,000 bushels at 2/6 a bushel for fruit not smaller than 2½ inches. Dehydration plants should be installed to treat 2,000,000 bushels; canning jam and juice would absorb the balance. Growers should be free to market fruit without restriction.

Mr. H. V. Smith (Batlow) said that Apples and Pears were being retailed in Sydney and suburbs at very reasonable prices, and any criticism of retail prices was unjustified. Criticism of retail prices had adversely affected the market.

Continuing, Mr. Smith urged the necessity for a hail insurance

scheme on an Australian-wide basis with differentiation between States regarding premiums.

Mr. Perkins, M.H.R., said he was informed that last season a grower had bought his own fruit at 4/- a case and later sold it for 25/- a case.

At Orange, Mr. Sydney A. Stanford, in giving evidence, complained of unsatisfactory experiences with regard to receiving payments.

Mr. E. E. Sampson, Chairman of the Fruitgrowers' Defence League, said the Board was to blame for shortage of cases. It was uneconomical to bring Apples to Orange for storage. He considered that an alternative to acquisition would be for the Commonwealth Government to purchase about 5,000,000 cases and leave the growers to market their usual quantity in Australia. The scheme this year was better than last year's.

Senator McLachlan: "You are doing harm by stating the loss this year will be over £2,000,000."

Mr. Fitzroy Brand, manager of the Orange Producers' Co-op. Society, said last year's scheme was a ruinous one; this year's amended plan would tend to force growers off their properties very shortly. If the market were relieved of the surplus growers could satisfactorily market their fruit. Under acquisition the initiative of the growers was taken away.

Mr. W. J. I. Nancarrow considered that the N.S.W. Committee was not doing worthwhile work. The system was at fault.

Mr. H. K. Chapman (Bathurst) advocated abolition of the Board.

Mr. W. B. Pascoe said the scheme suffered from maladministration. He was surprised at the early sale of Delicious at 9/6 a case when they would bring better prices later. Mer-

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Late Valencia, Navel, Sweet Rind Lemon, Rough Skin Seville, Imperial Mandarin, Emperor Mandarin.

Interstate—£50 per 1,000 F.O.R., £47/10/- 2,000 lots, £45 3,000 or over.

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KURRAJONG, N.S.W.

APPLE AND PEAR BOARD ENQUIRY—(Continued).

chants were picking the eyes out of the Delicious.

Mr. C. Hodgman and Mr. Jas. Thorpe tendered evidence re hail marked fruit, which they should be allowed to sell or else receive compensation.

At Brisbane Mr. E. L. Donaldson, State Superintendent of the Apple and Pear Marketing Board, said that war worries and increased taxation had lessened the demand for fruit. Several witnesses said the Board should distribute the fruit at a cheaper price, but Mr. Donaldson stated the aim was to market as much fruit as possible at a reasonable price.

Mr. F. C. Hooper (Thulimbah) said he was satisfied with the operations of the acquisition scheme except for minor details.

Mr. H. V. Geeves, on behalf of the Queensland Chamber of Fruit and Vegetable Industries, said that control had been placed

in the hands of those with insufficient marketing experience. Shipments were spasmodic, and there was no continuity of supply. Some form of control was necessary; export growers should be subsidised and growers allowed to market their fruit.

Mr. G. Hogan (Brisbane Retail Fruiterers' Association) said the trade suffered from lack of information and shortage of supplies. Retailers objected to the local Board endeavouring to fix retail prices in shops.

Mr. J. Chamberlain, fruit retailer, said too much money was going into the pockets of the growers. The scheme was a growers' harvest; they were being paid for rubbish which should be destroyed.

In reply to a statement by a witness that agents were not consulted in the fixation of prices, Mr. Donaldson said the

Brisbane section of the Committee met every Friday to review prices for the following week. Retail prices could be considered fairly satisfactory, though a big drop in wholesale rates was rarely reflected proportionately in retail values.

Mr. Donaldson said that while the present world emergency exists acquisition was necessary to prevent disaster overtaking the Queensland Apple and Pear grower.

APPLE BOARD INQUIRY.

The personnel of the joint Parliamentary Committee to inquire into the operations of the Apple and Pear Board is as follows:—Messrs. Perkins (U.A.P., N.S.W.), chairman; Pollard (Lab., V.), Bell (U.A.P., T.), Frost (Lab., T.), Wilson (C.P., V.), and Senators Fraser (U.A.P., W.A.) and James McLachlan (U.A.P., S.A.).

The terms of reference of the Committee are to inquire and report on:—

- 1. The administration and financial operations of the Board.
- 2. The adequacy of the national security regulations for the carrying on of the proper functions of the Board.
- 3. Any other proposals for the disposal of the Apple and Pear crop.

APPLE AND PEAR BOARD DEFENDED AT U.A.P. CONFERENCE.

At a meeting of the United Australia Party in Sydney a resolution was submitted that the Federal Government should abolish the Apple and Pear Board. Grower delegates strongly opposed the motion, contending that if the Government had not appointed the Board, Apple and Pear growers would have been in a desperate position. The Federal Government had come to the aid of the growers, paying them for the naked fruit in the orchard.

Sir Chas. Marr said that such losses as had been revealed were nothing to what the losses of the growers would have been had the acquisition plan not operated. The motion was defeated.

HALF AN APPLE A DAY.

That is What Australians Eat on the Average.

Apple and Pear Board Commended.

At the Annual Conference of the Liberal Country Party, Mr. W. Young, a former member of the Apple and Pear Board, said that statistics showed the average Apple consumption per head of population in the Commonwealth was half an Apple a day. He defended the Apple and Pear Board and urged critics to give it time to prove its worth.

The Conference rejected a motion requesting an enquiry into the administration of the Board.

MEETING AT FRANKSTON.

There was a large attendance at the meeting at Frankston (Vic.) convened by the Fruit-growers' and Primary Producers' Defence League and the Free Marketing League.

Cr. F. H. Wells, who presided, said the Apple and Pear Board had been created in the interests of Tasmania; there had been much unnecessary wastage in Victoria.

Col. Ryan, M.P., stated he was in favor of a modified form of control as a war measure (dissent). Proceeding, Col. Ryan said that of the 12,000,000 bushels of Apples grown in Australia, only 6,000,000 bushels were consumed in the Commonwealth. The Government did not like the acquisition scheme, but he did not see how the industry could carry on without Government assistance. Without such assistance thousands of growers would be ruined, and a national productive asset laid waste. The Government could not subsidise without having control. He sympathised with Peninsula growers in their particular problems and suggested that distribution might be increased by having large centres for the sale of fruit in the country.

Mrs. Serpell strongly opposed action by which the grower lost the right of ownership in the fruit he had produced. The Board was wasting Government revenue.

A resolution was carried as follows:—

That this meeting of Peninsula and Metropolitan Fruit-growers and consumers strongly urge the Federal Government to abolish the Apple and Pear Board, and substitute an early return to free marketing, and, should the Government intend next season to make any further monetary advances, that they be made direct to the growers to enable them to market their own fruit in their own way.

You ought to read these six booklets

THE A.M.P. Society has prepared six folders and booklets for those young men and women who want to get ahead financially; who want to strengthen themselves so that they and their families may be prosperous and secure.

These six folders are named in the coupon below. Put a cross against those you wish to read (we suggest that you put a cross against all six) and send the coupon to the nearest A.M.P. office. Reading the folders may give you a new outlook on life and its opportunities. You could not spend a twopenny stamp in a more fruitful way. Send the coupon to-day.

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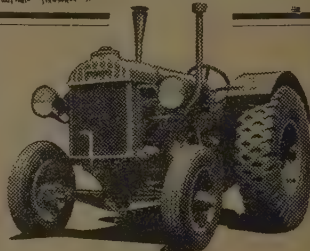
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SOYA BEANS

Success With Trial Tests in Victoria :: List of Recommended Varieties :: Food Values :: Uses in Manufacture :: Cultural Hints

"The potentialities of Soya Beans warrant detailed investigation."

TRIALS WITH SOYA BEANS were carried out by the Victorian Department of Agriculture over 30 years ago, but little interest was subsequently manifested in the growing of the crop. It is probable that the relative failures of any attempts to grow the bean by farmers were due to the use of unsuitable varieties, and insufficient attention to proper methods of cultivation. It is possible also that for success inoculation of the seed may be required.

The attention of the Department was, however, again directed towards the crop about eight years ago following on the receipt of reports of the tremendous expansion of the acreage sown to the crop in U.S.A., Manchukuo and other places, and of claims made as to the value of the crop from a dietetic and soil renovation point of view, as well as from the standpoint of the many directions in which it can be used in industry.

In view of the limited staff available, it was considered unwise to embark on any extensive trials, but in 1934 the Department planted a small plot of Soya Beans (inoculated seed) on sandy loam hill slopes in North Gippsland. Germination was poor, growth moderate, and maturity rather delayed. There was a good development of root nodules on inoculated plants, but this did not have much apparent influence on the growth and yielding ability of the beans in this instance.

In 1935 the progeny of the 1934 crop was again planted, but the crop was lost by Summer floods.

In 1936 small samples (1 oz.) of nineteen varieties of beans were sent by Mr. H. C. Forster from America, and were planted in December at Myrtleford in the Ovens Valley. Planting was late, and growth was encouraged by artificial watering. The final growth was very prolific and the beans podded well. Many of the varieties were rather late in maturing and were damaged by an early frost before harvesting.

Of the varieties under test, Illini, Dunfield, Manchu, Mukden, Rokusun, Virginia, Mansoy, Laredo and Easy-Cook, were the earliest maturing. Of these, Illini was much the earliest, but Virginia probably the bulkiest. Of the other varieties under test, Biloxi and Ootootan, on appearance, appealed as a fodder bean. They possessed very soft foliage, but seemed very late and rather shy podders.

Despite the lack of positive information relating to the crop, it can be stated fairly confidently that this plant would thrive on the better soil types in the higher Summer rainfall parts of this State.

In Victoria, the beans probably would thrive well on the various rich river flats in Gippsland or the North East, but it has not been proved that they would do well on relatively poor soils where Summer rainfall may be very irregular.

There seems to be no urgent call for their introduction to the more favored areas previously mentioned, although first seed supplies probably will have to be built up in these districts.

Their value as a national asset depends on the manner in which they will thrive in much of the poorer sandy loam soils which, in parts of Victoria, receive a moderately good rainfall.

It is not possible to accurately assess their possible potential value to the State. Although there seems to be a reasonably good potential market in sight among bakers and dietitians generally, it probably would not take very long to fill this demand. The development of the crop subsequent to that would depend on whether other by-products could be extracted at a price that would compete with overseas supplies of similar or competitive material.

There should be some possible utilisation of the crop as a stock food and soil renovator, but its value in this respect, relative to other well-established legumes, is not possible to determine without considerable experimentation.

Established uses of the bean are as follow:—

The plant makes an excellent stock food, and in Eastern countries the bean is used largely as a cheap source of protein in the national diet.

From a dietetic point of view the bean has a marked value for diabetic patients as it contains little sugar and no starch. It is used for various table dressings, and may form the basis of soups, macaroni, breakfast foods, lard and synthetic butter and milk. It is credited also with possessing various medicinal properties.

On pressing, the bean yields a high percentage of oil which may be used in paints and varnishes. Various by-products can be converted into soaps, greases, etc., and into products similar to vulcanite-ware. Horn

buttons, light switches, etc., of a popular make of car are largely derived from Soya Beans. The residual meal is, of course, an excellent stock food.

It is considered that the potentialities of the Soya Bean warrant some form of detailed investigation.

Cultural Hints.

Soya Beans are Summer growing legumes, thriving best in a well-drained sandy loam and a warm humid climate. They are regarded as being sensitive to frost at all stages of growth, and seeding must therefore be delayed until danger from this cause is past. Mr. J. L. Willis, of Drysdale, who has been interested in the bean for some years, claims that seeding can be carried out much earlier than generally is considered possible. The land should be prepared by ploughing early and subsequently cultivating thoroughly.

It is recommended that seed be planted 2 in. deep in rows 30 in. to 36 in. apart, but it is suggested that for a seed crop it may be possible to plant somewhat wider apart in the row with less space between the rows. The seed cannot push through a crusted surface, and in some soils it may be necessary to harrow lightly before germination. If weed growth is bad, inter-row cultivation will be necessary, but this should not be carried out after flowering.

No local evidence as to manurial requirements is available, but it is probable that the beans would respond to a superphosphate plus ammonium sulphate mixture in the proportion of 3 to 1, applied at the rate of 1½ to 2 cwt. per acre. Mineral fertiliser should not be applied in direct contact with the bean seed.

As a fodder crop, the greatest palatability and feeding value are obtained when the pods are just forming. For seed, the crop should be cut when about three-fourths of the pods are ripe.

Cutting can be done with the ordinary mower, and the grain can be threshed with an ordinary thresher after adjusting the drum to prevent cracking.

APPLE JUICE.

Big Developments in Canada.

The quality of Canadian Apple juice has been enhanced by the improvements in methods of processing and in containers, and people are drinking more Apple juice not only because they know it is nutritious, but because they like it.

Considerable research is being carried on and improved methods of handling the fruit, the deaeration and flash pasteurising, have assisted in producing a finely flavored Apple juice of good keeping qualities.

Improvement in the treatment of tin cans for the juice has also helped the marketing of the product.

TUNG OIL PROSPECTS.

Ready Market Available.

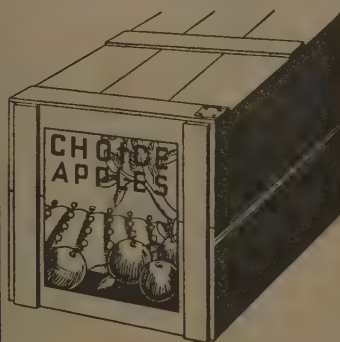
Always on the lookout for new avenues of profit, the eyes of some farmers are being turned towards the growing of Tung trees, the nuts of which are in demand for the extraction of the oil that is used extensively by paint manufacturers.

From reports, it appears that there are certain conditions under which the tree will thrive, and what is termed the tung oil belt applies to particular areas in the Commonwealth. For instance, the trees require an annual rainfall of about 28 inches or more. The soil should be well drained, undulating, without limestone. The trees require frequent cultivation during the first Summer months, and watering is desirable.

The growth is comparatively slow in the first year, but increases rapidly thereafter. After the second year, very little attention need be paid to the trees. They suffer from no frosts and do not require pruning or spraying. When ripe, the nuts simply drop off, and can be raked up and bagged at convenience, since they do not perish on the ground. Since the nuts and leaves are not palatable for animals, grazing grasses can be sown among the trees.

Several growers of Grapes and Apricots in the Arbuckle district, Calif., are pulling out these varieties and planting Almond trees.

CASE LABELLING



USE THE PASTE THAT KEEPS THE LABELS ON

DAVIS 444

POWDERED ADHESIVE

Economical to use, easily prepared, easily applied, quick drying, non-staining, non-corrosive.

All particulars about **DAVIS 444 ADHESIVE**

from **Davis Gelatine, Melbourne.**

Supplies obtainable from hardware, paint and other stores.

The Market Grower

IN THE VEGETABLE GARDEN.

The following work and sowings may be carried out in the vegetable garden this month:—

Asparagus (Roots): Preparation should now be made in readiness for planting in June.

Broad Beans (Seed): Triumph, Masterpiece Green-Seed-ed, Leviathan.

Cabbage (Plants): East Ham, Enfield Market, Allhead, Velocity.

Cauliflower (Plants): Excelsior 212, Phenomenal Maincrop, Late Metropole.

Cress and Mustard: Seeds.

Herbs (Plants): Sage, Thyme, Marjoram, Savory, Tarragon.

Onions (Seeds): Odorless, Brown Spanish, White Spanish, Brown Globe, Spring Onion.

Onions (Plants): Barletta, White Queen, Mammoth Silver-skin.

Peas (Seeds where to Remain): English Wonder, Green-feast, Daisy, Melbourne Market, Yorkshire Hero.

Potatoes (Tubers): Procure good seed now and place in shallow trays to harden for planting in July. Brownell's, Carmen No. 1, Up-to-Date, Lapstone Kidney, Bismarck.

Radish (Seed): Giant Butter, Icicle, Cincinatti White Pearl, Long Scarlet, French Breakfast.

Plant roots of Rhubarb and tubers of Jerusalem Artichokes.

WINTER SPINACH.

Winter, or Prickly Spinach, possesses a very high vitamin and iron content, is invaluable as a Winter green vegetable. It requires a well cultivated, fertile and firm soil and, being purely a leaf crop, nitrogenous fertilizer should not be omitted.

After the first sowings in March, successional sowings are usually made at intervals of three or four weeks. Rows should be about 18 inches apart and the plants thinned to six inches; on rich soil, somewhat wider spacing is recommended.

An abundance of moisture is required to produce a crop of first class quality. Attention to adequate watering is therefore necessary if a dry Autumn is experienced.

TURNIPS ARE VALUABLE.

Winter Feed for Stock.

Turnips have proved valuable as stock feed. The area under this crop has increased in the Hunter River and other districts in N.S.W.

Seed sown even in mid-April produced good Winter crops. Seed sown now will provide late Winter and Spring crops.

POTATO INDUSTRY FACING A SERIOUS CRISIS.

THE POTATO INDUSTRY in Australia is facing a serious crisis because of the anticipated heavy crop this coming season, plus the present available surplus.

The sixth annual meeting of the Federal Potato Advisory Committee was held at Brisbane in mid-April. There was a representative attendance. Mr. W. C. Cambridge, M.L.C., presided.

The Victorian estimated crop of 190,000 tons is particularly heavy compared with the 88,000 tons last year. There has been a steady decline in prices. The conference advocated a system of minimum prices coupled with measures to prevent excessive planting. Very real difficulties exist, however, in the drafting of a scheme acceptable to growers in the several States.

Mr. C. J. McKeon (Director of Agriculture, Q'land.), directed attention to the poor quality of the seed and the fact that much of the seed is not true to variety.

It was pointed out that N.S.W., Victoria and Tasmania had seed certification schemes, thus providing growers with the opportunity of purchasing certified seeds which could be relied upon.

The fact that the Potato growers of Queensland were not

organised was regretted. It was deemed to be essential that uniform legislation should be enacted before the Australian Potato industry could be stabilised.

Production Figures.

Last season the crop was 304,000 tons. It was recognised that any attempt to estimate the production of Potatoes in the coming season was premature, but seasonal conditions favored a good crop.

Office-bearers were elected as follows:—Mr. W. C. Cambridge (Chairman); Mr. W. Chapman (Vice-Chairman). Executive: Messrs. Cambridge, Chapman, T. J. Ford, Pitt, Burvill and Murphy. Special Committee: Messrs. Cambridge, Chapman, and Murphy.

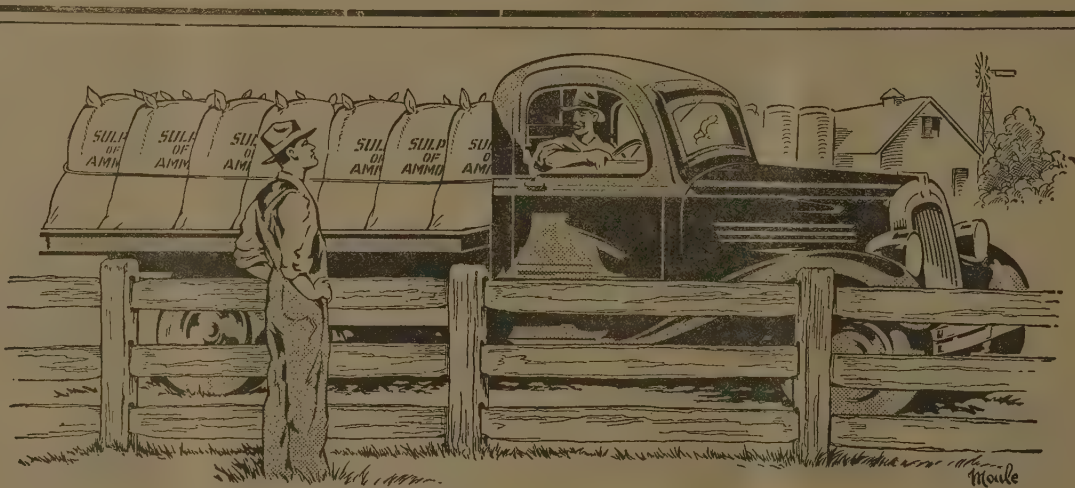
LICENCE FOR POTATO GROWING.

The N.S.W. Minister for Agriculture (Mr. A. D. Reid), has directed public attention to the Potato Growers' Licensing Act for 1940.

All persons who use an acre of land in excess of one acre for growing Potatoes must obtain their licences.

The licence should be obtained before planting is begun.

Applications are obtainable from the Department of Agriculture, Box 36A, G.P.O., Sydney. The registration fee is £1/1/-. Some people may have unwittingly broken the law. All those who have planted an acre of Potatoes in N.S.W. should immediately apply for a licence to avoid prosecution.



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ALL FRUITS and VEGETABLES

Get the most out of your crops with AMMONIA!

Supplies—All Local Agents.

SAVING TOMATO SEED.

Easy if Done Properly.

The use of seed saved from selected plants is a sound procedure in Tomato growing. The fruit should be allowed to become over-ripe before cutting it in halves and squeezing out the seeds and juice. On no account should water be added at this stage. The seeds and juice are allowed to ferment for at least 48 hours, the solution being stirred every morning in order that the mould and yeast fermentation will be even throughout.

The mixture is then diluted with water and vigorously agitated. The liquid is drained off, more water added, and the mixture again vigorously agitated and the liquid again drained off. This process is repeated until the liquid drained off is quite free of organic matter.

It is strongly recommended that, before drying, the seed should be dipped in a 1 in 1,000 solution of corrosive sublimate for ten minutes. After dipping, it should be given several thorough washings with clean water, otherwise the viability of the seed will be seriously affected. The seed should be dried rapidly in the sun. Care should be exercised in the handling of corrosive sublimate, even the diluted dip abovementioned being deadly poisonous.

Tomato seed, if mature when saved, fermented correctly and stored under good conditions, will remain viable for six years.

CHERRY CULTURE.

Importance of Rootstocks.

When Planting, Provide for Cross Pollination.

INTERESTING POINTS regarding Cherry culture were detailed recently by Mr. P. H. Thomas, Chief Horticulturist, Department of Agriculture, Hobart. Mr. Thomas states that the Mazzard would appear to be preferable to Mahaleb as a rootstock under Tasmanian conditions. Cherries on Mahaleb are generally more dwarfed and come into fruiting earlier. The Kentish stock sometimes used is unreliable, the trees being dwarfed and comparatively short-lived.

The necessity for cross pollination is stressed and hence the inadvisability of confining plantings to only one or two varieties.

For packing the N.S.W. case, 26 in. x 5 in. x 6 in., or 13½ in. x 5 1/10th in. x 4 in. is noted with approval. For dessert varieties hand packing and facing are adopted.

CITRUS NEWS and NOTES

(Continued from page 13)

V.C.C.A. SMOKE NIGHT.

Successful Function at Mildura.

FUTURE DEVELOPMENTS in the citrus industry were referred to by Mr. A. W. Schwenneesen, general manager of the Victorian Central Citrus Association at the smoke social at Mildura at the end of April: he said that before tackling the question of further plantings, it was necessary to survey the present ones, their productive capacity, existing and potential markets and the increasing of consumption on present markets. He gave an interesting report of the activities of the V.C.C.A.

Capt. D. B. Halhed, who presided, asked all to stand in silence in memory of two good V.C.C.A. members who had passed away—Messrs. V. L. B. Roberts and C. H. Cameron.

The chairman said the V.C.C.A. had performed excellent service since its commencement in 1922. Now 85 per cent. of the citrus fruit on the Melbourne market went through V.C.C.A. channels. More accurate crop estimates were needed from growers each season.

Mr. L. G. Lloyd said the success of the V.C.C.A. was due in no small measure to the efforts of Capt. Halhed. Some of the achievements were the development of export, pool returns, research and the organising of educational tours.

Mr. A. E. Cameron said there had been co-operation between packers, agents, Dept. of Agriculture, the C.S.I.R. and every section of the industry.

Mr. S. Taylor acknowledged the value of the assistance of the Murray Citrus Growers' Association (S.A.).

Mr. J. J. Medley (Murray Citrus Asso.) stated there was room for competition in co-operative effort. High quality fruit and good advertising were necessary.

Mr. Beverley, N.S.W. Dept. of Agriculture, believed in fumigation rather than spraying to control red scale. Mr. J. Rickard proposed the toast of the Commonwealth Research Station and the Dept. of Agriculture, and Mr. R. Roberts suitably responded.

Mr. G. E. Kitchen Kerr said that success in marketing depended on quality, continuity of supply, and organised selling.

MEETING AT CURLWAA.

Information of much interest to citrus growers was given at a meeting at Curlwaa (N.S.W.) at the end of April by Mr. Benton, Senior Supervisor, N.S.W. Dept. of Agriculture. Growers attended from Coomealla and from the Victorian side of the Murray River.

Acetylene is being used as a substitute for ethylene gas for coloring citrus. Careful handling is necessary.

KURRAJONG (N.S.W.) CITRUS NURSERY.

Thousands of Trees of Good Parentage.

For many years there has been situated on the foothills of the Blue Mountains, about five miles out of Kurrajong, N.S.W., a noted citrus growing district, a fruit tree nursery conducted by Mr. T. W. McMahon, at one time a prominent member of the Fruitgrowers' Federation.

Mr. McMahon, now a veteran grower, still offers to orchardists each year reliable trees from carefully budded stock. At the present time he has 32,000 young citrus trees available, including Washington Navels, Valencia, and Imperial and Emperor Mandarins. Some of

wood. It has proved a vigorous grower, a good cropper, with a thin skin, a small Navel, and no pith.

One of his Valencia's was imported somewhere between fifty and sixty years ago by a Bathurst-street fruit merchant named "Scotty" Smith, who planted it in his orchard at St. Ives. About six or seven years ago, at the last fruit show held at Gosford, a local grower named Anderson won several prizes with fruit cultivated from this old stock.

All the young trees cultivated by Mr. McMahon at "Mountain View," on which he has resided for thirty-eight years, are budded on to Eureka or Sweet Rind Lemon.

This year a freak Navel tree is to be seen among the young



A section of the Citrus Nursery of Mr. T. W. McMahon, Kurrajong, New South Wales.

the parents of the Navels were imported from America nearly fifty years ago, when the Hawkesbury College was just being established. Tests have proved that the lowest yield from these newcomers was eight cases per tree, and up to thirty cases. Mr. McMahon possesses a Navel imported from Italy in 1929 in the form of budding

stock on the property. It was budded in the ordinary way on a rough-skinned Lemon, but it is now sporting long narrow leaves with a pronounced serrated edge, not unlike that of the Waratah. The adjoining trees in the nursery are quite normal. Interest now attaches to the manner in which the trees will bear fruit.

N.S.W. CITRUS CROP.

Benefits by Rain.

The coming citrus crop in the coastal areas of N.S.W. has benefited by the recent rains. With regard to the Hawkesbury district, at the end of April the Chief of the Division of Horticulture, Mr. C. G. Savage, said that Navels were growing well, large sizes predominating. Coloring should soon occur. Silettas were coloring, and it was expected that some would soon be fit to market. Valencia's were filling well and crops appeared to be medium. Average crops of Lemons were in sight on young trees; main crop fruit is being harvested. Mandarins were filling out satisfactorily. Ripening would probably occur earlier than usual,

and at this stage the crop appeared heavier than that of last season. Emperors had excellent prospects.

Navel Oranges needed more rain in some orchards around Windsor, but satisfactory development was taking place where plenty of moisture was available. Valencia's and Common Oranges in irrigated groves were growing nicely; elsewhere the fruit was at a standstill before the rain came.

The Navel crop around Leeton ranged from poor to good, and, generally speaking, was much lighter than last season. Large fruit, however, should be plentiful. The position was similar in respect of Valencia's; several thousand cases of the current season's crop remained to be harvested. Lemons and Mandarins were patchy.

MAKE YOUR
MONEY FIGHT
WAR SAVINGS
CERTIFICATES

NEW SOUTH WALES.

Curlwaa and Coomealla Irrigation Areas.

The N.S.W. Minister for Agriculture, Chairman of the Water Conservation and Irrigation Commission, in his report for quarter ended March 31, 1941, states that the quality of dried Sultana fruit is good, but it is estimated that the production figure will be somewhat less than that of last year.

Most of a record crop of Valencia Oranges has been harvested, but there are still quantities of fruit on the trees. In view of the heavy production and the smaller sized fruit, the prices realised have been satisfactory, although disposal has been somewhat delayed. A record crop of Grapefruit was also harvested, with quality of fruit good and prices normal.

From observations made it is evident that Navel and Valencia crops for next season will be light. The Navel crop is well advanced and the fruit is likely to be large.

Green manure crops are at present being planted on both Areas. Artificial manure is not coming forward in large quantities, and is rather difficult to obtain.

VICTORIAN CENTRAL CITRUS ASSOCIATION.

At Mildura recently, Mr. A. W. Schwennessen, general manager of the Victorian Central Citrus Association, said that the last balance sheet showed that the cost of conducting the affairs of the V.C.C.A. was £4,330: total sales were £167,500. But there were other factors, and the total value of the fruit which came under the influence of the V.C.C.A. was £327,000, and the cost was just over 1 per cent. Accumulated profits were £1,260, Publicity services cost £3,000.

Producers' Co-operative Distributing Society Ltd.

Are now paying a Bonus of 15% on all Commissions charged to regular clients of the Fruit & Vegetable Section for year ending Sept., 1938

Send Your Consignments

TO US

MELBOURNE & SYDNEY.

YOUNG FARMERS' CLUBS.

The Education Department of Victoria has invited head teachers in rural districts to form branches of the Young Farmers' Club, and to conduct projects on various phases of agricultural work, including the cultivation of flowers, vegetables and fruit.

There was keen interest in the displays by Young Farmers at the Bairnsdale Convention of the Victorian Chamber of Agriculture, April 22 to 24.

At a conference of teachers from schools in the Rochester district, Mr. Hedley Jones, a Supervisor of the Young Farmers' Movement, explained the conditions of the competition for the Norman Martin Shield and the William Dunstone Shield. It was decided to have 12 plots, each 6 ft. by 3 ft., to sow grasses and Clovers—Alyske, Tallarook Subterranean, Lucerne, Wild White, Strawberry, Red, Perennial Rye, Cocksfoot (Vic.), Prairie, Phalaris Tuberosa, Kentucky Blue, Paspalum. Manure, one oz. of superphosphate per sq. yard, for germination purposes, with subsequent applications as desired; all manuring to be recorded. The project books (which shall be ordinary exercise books) from Grades 5, 6, 7, 8, must be shown. The work to form part of the year's science course. Full record of plots, pressed specimens of fodders, plants and weeds of the district, with informative notes and dates, must be kept.

Progress has been made at Koyuga and Picola. At Mundauna the successful orchard

and small pasture plot studies are being supplemented by growing vegetables for the Red Cross. There was a fine crop of Cauliflowers.

A FLAW IN THE FLOOR.

Enthusiastic House Agent: "Now, here is a house without a flaw."

Prospective Tenant: "My gosh! What does one walk on?"

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Clarke, H. M.	Hawke, J.	Silk Bros.
Clarke & Son.	Hie Lee & Co. Ltd.	Small, E. A.
Clarke, R. G.	Isaacs & Sons	Southcott, W. H.
Clayton, J., & Son.	Johnston & Tebbutt.	Stevens, F. G., & Sons.
Clements & Kemp.	Leadow, A.	Sun Lee & Co.
C.O.D.	Locke, L. T.	Terrill, R. A.
Comino Bros.	Mitchell & Galvin.	Thompson & Smith.
Cooke, E.	Mitchell, T. S.	Valentine, A. B.
Cooper, C.	Molesworth, G. H.	Wade, E. M.
Curtis, W. J.	Montgomery & Son	Watson, R. B.
Denig Bros.	Moss, A.	Wing Bros.
Dickson, H.	Moss, J., & Son.	Wing On & Co. Ltd.
Dunstan & Norris.	Parker, E. W., & Son.	Wing Sang & Co.
Evans, E.	Paul, W. J.	Wing Tiy & Co.
Farley, J.	Peters, S. A.	Woods, W. O.
Fong, Sue & Co.	Producers' Co-op. Socy. Ltd.	Yick, S., & Co.
Gauld, H. M.		Yocksul Bros.

P. S. MACDERMOTT, General Secretary,
215a Thomas St., Haymarket, Sydney.

City Fruit Markets Sydney N.S.W.

Licensed Farm Produce
Agent

F. CHILTON

ESTABLISHED 1894

Fruit Commission Agent

SHIPPING NO. 56.

HIGHEST MARKET PRICES

— PROMPT RETURNS

— RELIABLE ADVICE.

Registered Address for Telegrams and Cables:
"CHILTONS."

References:—Bank of N.S.W., Haymarket, Sydney,
and Growers throughout Australia.

10 CITY FRUIT MARKETS, SYDNEY.

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N. & A. Fruit and Produce Pty. Ltd.

Licensed Farm Produce Agents. (No. 2253)

HEAD OFFICE:

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References: Bank of New South Wales.
Shipping Numbers on Application.

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PHONES:

Newcastle, 1365.

Sydney, MA 8428.

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21 CITY MARKETS, SYDNEY.

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Established 1882.

SHIPPING NO. 19.

88 VIC. & TAS.

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Telephone MA 3848.

Established 1900.

W. MUSGROVE & SON

Licensed Farm Produce Agents.

8 City Fruit Markets, Sydney.

Our Motto—Quick Sales and Prompt Settlements.

Forwarding Numbers:

Tasmania, Victoria, S. Australia, No. 53.

Queensland, Northern Rivers, No. 18.

CO-OPERATIVE SELLING IN SYDNEY.

In order to attend to the co-operative selling of produce, the Growers' Co-operative Sales Ltd. has been registered as a company in Sydney. The foundation societies are the Young Cool Stores Rural Co-op. Society Ltd., the Leeton Co-operative Cannery Ltd., the Batlow Packing House Co-operative Ltd., and the Yenda Producers' Co-operative Society Ltd. The four directors appointed are: Mr. W. C. Dickinson, manager Young Cool Stores Rural Co-op. Ltd.; Mr. H. G. Williams, general manager, Leeton Co-op. Cannery Ltd.; Mr. H. V. Smith, manager, Batlow Packing House Co-op. Ltd., and Mr. G. Enticknap, manager, Yenda Producers' Co-op. Society Ltd.

Three stores in Ultimo-road have been purchased for this co-operative selling floor.

AUSTRALIAN EXPORT GRAPE ASSOCIATION.

In order to deal with the export of Grapes, particularly Ohanez variety, an Australian Export Grape Association is now functioning. The first annual meeting was held at Melbourne at the close of last year.

In view of the importance of Grape export from Western Australia in that W.A. growers produce only for export, Mr. A. H. Convoys was elected Honorary Secretary, with the Secretary of the Victorian Ohanez Association, Mr. E. Russell, as Assistant Secretary. Mr. Cockroft, a Victorian grower, was elected Chairman, with the following comprising the executive:—Messrs. W. Oakes (growers, Vic.), E. Lawford (shippers, Vic.), R. Carter (shippers, W.A.), A. H. Convoys (growers, W.A.), J. W. Blick (shippers, N.S.W.).

It was left to Mr. J. W. Blick to arrange for a growers' representative from N.S.W., and the Sydney Chamber of Commerce was to be notified of this arrangement. Mr. R. Carter accepted the position of Honorary Treasurer.

The difficulty of exporting Grapes during war time is appreciated, but every effort is being made to secure refrigerated space for Eastern ports.

FEDERATION CONFERENCES.

The annual district conferences under the auspices of the Fruitgrowers' Federation of N.S.W., will be held as follows:—

Central Rivers: Boolaroo, Tuesday, May 6.
Central Coast: Gosford, Tuesday, May 6.
New England: Kentucky, Thursday, May 8.
Southern: Tallong, Thursday, May 8.
Hawkesbury: Windsor, Saturday, May 10.
Irrigation Areas: Griffith, Tuesday, May 13.

NEW SOUTH WALES.

Sydney: The following notes and prices are taken from the "Weekly Marketing Notes" issued by the State Marketing Bureau of N.S.W. for the week ending April 23.

The market for Apples was affected by the quantities of overripe interstate fruit which had to be cleared at concession rates. Choice dessert lines of locally grown Jon. and Del. were in request. There were only light supplies of G. Smiths, and values firmed. A fresh shipment of Tas. Apples arrived on April 22; the quality was more satisfactory and demand better.

Request for Packham's Triumph Pears, particularly large sizes, was steady. W. Cole and Doyenne du Comice Pears from Tas. were over-mature in many instances, and difficult to clear. Vic. Josephine and B. Bosc from Tas. met steady demand. Values throughout the period showed little change.

There was a falling off in consignments of Bananas, and values advanced. Inquiry generally was steady, and best sizes realised to 21/- case, with an occasional special dearer.

Fairly heavy supplies of Pineapples were forward. The general quality was fairly satisfactory, although some lines showed breakdown. Prices were maintained at 6/- to 10/- case, with a few special brands higher.

Increased quantities of Custard Apples from Queensland met good demand, sales mostly being made at 4/- to 6/- half-case.

Navel Oranges from coastal growers were on offer, but there was little inquiry, as buyers preferred Valencias, which were of better appearance and fairly plentiful, especially M.I.A. packs.

Demand for Lemons was somewhat quiet, but prices showed little change. Grapefruit from coastal areas, except a few special packs, were neglected by buyers. Imperial Mandarins realised up to 5/- half-case.

There was an easier tone in the market for Passionfruit, and prices were reduced.

Choice Black Muscatel Grapes were lightly stocked towards the close of the period, and values firmed. Supplies of Cornichons were plentiful, but rates were steady. White Muscatel and other White varieties continued to sell slowly.

Current prices are:—

Apples: Jon. (N.S.W.), 3/6 to 8/-; G. Smith, 5/- to 8/-; Del., 4/6 to 10/-; Jon. (interstate), 5/- to 7/- (overripe lines lower); Del. (Tasmania), 4/6 to 7/-; Cleo. (Tas.), 4/- to 6/6; R. Beauty (N.S.W.), 4/- to 7/- case.

Pears: Packham's T., 5/6 to 9/6; W. Cole, 5/- to 8/-; B. Bosc (interstate), 6/- to 7/-; W. Cole (interstate), 6/- to 7/6 (ripe

lots lower); Packham's T. (interstate), 6/6 to 8/6; Doyenne du Comice, 5/- to 6/- (ripe lots cheaper); Jos. (Vic.), 6/- to 7/6 case.

Grapes: Black Muscat (interland), 4/- to 10/- (few 11/-); other Black varieties, 3/6 to 4/6 (small quantity 5/-); White varieties (including Muscat), 3/6 to 5/-. **Passionfruit:** 4/- to 9/-. **Persimmons:** 1/6 to 4/-. **Custard Apples:** 3/- to 6/- half-case.

Quinces: 4/6 to 6/6 bush. case.

Bananas: Nines and Eights, 18/- to 21/- (few special higher); Sevens, 14/- to 17/-; Sixes, 10/- to 14/- (ripe and inferior lower). **Pineapples:** 6/- to 10/- tropical case.

Oranges: Navel, coastal, 5/- to 8/-; Val., coastal 3/- to 8/- (few dearer), Irrig. Area 5/- to 9/-. **Lemons:** Coastal, 4/- to 9/-; Q'land., 10/- to 15/-. **Grapefruit:** N.S.W. coastal, 3/- to 7/-; Gayndah, 8/- to 15/-; other Q'land. centres, 5/- to 10/- case.

SOUTH AUSTRALIA.

Adelaide (30/4/41): The following prices are supplied by the S.A. Fruitgrowers' and Market Gardeners' Association Incorp.

Most vegetables were in good demand on Wednesday's market, but mainly quotes were unaltered. Beans improved in price and Peas were in good demand. Tomatoes also sold at increased rates. Bunch vegetables had a ready clearance. Fruit sales were steady at unchanged rates.

The undermentioned quotes are for f.a.q.

Vegetables: Beans (French), 2/-, 2/6 doz. lbs.; Beetroot, 1/6 doz.; Cabbages, 2/6 to 5/- doz.; Carrots, 1/6 doz. bchs.; Cauliflowers (large), 5/- doz.; Celery, 3/6 doz. hds.; Leeks, 2/- doz.; Lettuces, 1/-, 1/6 doz.; Onions, 8/- cwt.; Parsnips, 2/- doz. bchs.; Peas, 5/-, 6/- bush.; Potatoes, 5/-, 5/6 cwt.; Rhubarb, Cherry, 1/- doz. lbs.; Tomatoes, 9/-, 10/- ½ case; Trombones, 4/-, 5/- cwt.; Turks Head, 4/-, 5/- cwt.; Turnips, 1/6 doz. bchs., Swede 2/6 doz. bchs.; Triangles, 4/-, 5/- cwt. Cases extra.

Fruit: Oranges, Val., 14/-, 15/- case; Lemon, 16/-, 18/- case; Quinces, 2/6, 3/- ½ case; Grapes, 4/6 ½ case; Bananas, 24/-, 26/- crate; Pineapples, 14/-, 17/- crate.

VICTORIA.

Melbourne (3/5/41).—Fruit Prices: Fair sales were made at the fruit market yesterday, and although Lemons were slightly easier, other lines were steady. Wholesale Fruit Merchants' Association prices (per case) were:—Apples, eating, 5/-, 8/-; cooking, 3/6, 6/-; Bananas, 12/-, 20/-; Cantaloupes, 4/-, 8/-, few higher; Grapes, 4/-, 12/-, few specials higher; Grapefruit, 10/-, 17/-; selected higher; Lemons, 8/-, 16/-, selected higher; Oranges, 5/-, 11/-, selected higher; Passionfruit (half case), 2/-, 4/-; few higher; Pears, 5/-, 11/-; Pineapples, 8/-, 10/-; few higher; Tomatoes, 4/-, 12/-, few higher; S.A. Celery, 8/-, 10/-.

Agents in the BRISBANE FRUIT MARKETS

Highest Prices. **A. S. BARR** Prompt Returns.
FRUIT EXCHANGE, BRISBANE, QUEENSLAND.
Wholesale Fruit Merchant and Growers' Agent.
A Trial Solicited. Returns Speak for Themselves. Shipping No. 19.
Established 1888. Registered Telegraphic Address: "Barr, Brisbane."

W. Arkell & Sons Estab. 1892
BRISBANE, B.12. GROWERS' AGENTS.
Shipping No. 12
Bankers: National Bank of Australasia, George St., Brisbane.



SECTIONS
5, 41, 42
ROMA ST., MARKETS

MURRAY BROS

The Victorian Central Citrus Association reported yesterday that there had been a good clearance of medium sized Valencias during the week, but large sizes in all grades were slow of sale. A comparatively large quantity of Valencias remained to be marketed, despite the lateness of the season. The marketing of Navel Oranges, which usually begins in mid-April, had been postponed until May 7, but only light supplies were expected within the next ten days. New season's Grapefruit was in demand, but generally supplies were light.



MARKETING AND DISTRIBUTION.

Retail Distribution of Foodstuffs in Sydney.

A CONFERENCE of retailers of fruit, vegetables, meat and fish, convened by the N.S.W. Government, was recently held at Sydney.

Among the many resolutions carried were the following:—

That marketing facilities are insufficient in many urban areas.

That retail public markets should be encouraged in the Sydney metropolitan area.

That the retailing of fruit and vegetables by department and chain stores was in the interests of both producers and consumers.

That Municipal and Police authorities should deal leniently with roving or itinerant barrowmen, within the limits of traffic necessities.

That approximately 7 p.m. be the closing hour for fruit and vegetable shops on week days, and that no shop be permitted to trade on Sundays except in the beach and Kings Cross areas.

That the State Government be requested to prohibit the issue of coupons and gift tokens in trading with essential foodstuffs.

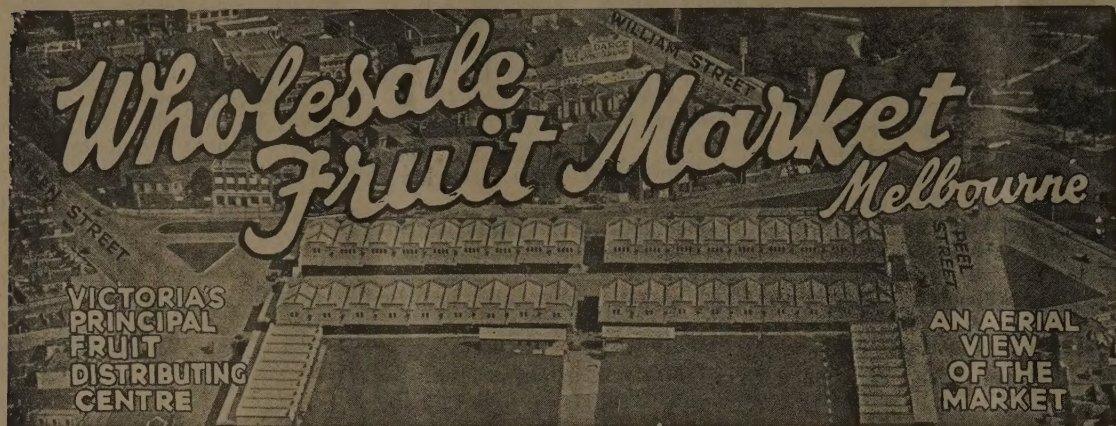
APPLE AND PEAR PUBLICITY CAMPAIGN.

A publicity campaign by the Apple and Pear Marketing Board is now being conducted.

The programme includes press and radio announcements, distribution of shop display material, recipe books, and the display of single-sheet and 24-sheet posters throughout the Commonwealth.

Every avenue of publicity is being exploited.

Educational work, dealing with the health and nutritional value of Apples and Pears, is being conducted in conjunction with the medical and dental professions, and nutritional authorities.



Cable Address: DAVIS, MELBOURNE. Code: "ABC," 4th and 5th Editions. Box, G.P.O. 148B.

J. DAVIS PTY. LTD., Fruit Merchants
8 WHOLESALE FRUIT MARKET

Consignments solicited. One Trial Invited. Best Prices obtained. Prompt Advice and Payment.
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Telegraphic Address: "Listeria," Melbourne. Telephone: F 6241. Private: Win. 4535.

Codes: Bentley's A.B.C 5th Edition. IMPORTANT TO GROWERS Box 555D, Melbourne.

Australia looks to you to produce and sell good fruit, but to PRODUCE GOOD FRUIT and have it badly sold is a reflection on your business ability. To sell well is as important as to produce well. The greatest combination that can exist beneficially is that between a painstaking fruitgrower and a painstaking salesman.

If you have good fruit to market, you will find in the firm of **GEORGE LISTER PTY. LTD.** the service you require. Established over 50 Years.

GEO. LISTER PTY. LTD. 12 Wholesale Fruit Market, Franklin Street, Melbourne.

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Assured Highest Market Rates.
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Wholesale Fruit Merchants,
20 Wholesale Fruit Market, Melb.
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Regular Supplies of
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and Graded will realize
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**Tim Young & Co.
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WHOLESALE FRUIT MERCHANTS

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Growers can be assured of receiving
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PROMPT RETURNS. £1,000 FIDELITY BOND.
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Members Wholesale Fruit Merchants' Assn. of Victoria.

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Growers in all States are invited to
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rates and prompt settlements.

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Accredited Agent for Growers'
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Growers Will Receive Top Market
Value and Prompt Returns.

Fidelity Bond Guarantee for £1,000
13 and 14 Victoria Market.

Pea and Bean Stands,
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Phone: F 5035.

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and Exporters
of South
Australia**

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H. C. Austin

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Merchant, General Exporter, Com-
mission Agent, Shipping Provider.

Specialty Overseas Export
All Countries.

New Market, Union St.,
Adelaide

Phone C 746. G.P.O. Box 722
Telegrams: Austin Fruit.

Poultry Notes

FEEDING OF YOUNG STOCK.

The Best Procedure.

MANY POULTRY FARMERS appear to be in doubt as to the number of feeds per day which young stock should receive when they come into production, and some continue to give three full feeds, while others omit the mid-day feed and still give the usual morning and evening meals. Actually, a compromise between the two is most satisfactory. It will be found that as the pullets reach maturity and the hot weather commences, their appetites will be less keen, and the mid-day feed should be reduced accordingly; but it is not advisable suddenly to cut it out altogether. The best course is gradually to reduce the quantity of mash used and increase the amount of green feed given at mid-day, so that later on the mid-day feed would consist mainly of green feed with a little pollard and bran added.

Younger birds, which have not reached maturity, should receive three feeds per day. The morning mash should be the same as that fed to the adult birds, and at mid-day a mash without meat meal should be given and grain in the evening. During a hot spell of weather they will, of course, not eat as much as usual, and it is essential that they be fed in the shade, otherwise the mash becomes dry and is then wasted. At each meal the birds should be given as much as they will clear up within an hour of feeding, and any food left after this time should be cleaned up so that the birds will be keen for the next meal.

COLDS IN POULTRY.

Colds in poultry, particularly young stock, are prevalent at this time of the year. Catarrh, chicken pox, or roup may follow, and the birds will be out of production.

Fowls affected with colds have an excess of mucous and usually a discharge from the nostrils. Causes are insufficient green feed and lower vitality.

If possible, the birds should be isolated.

In cases of catarrh, there is a thick discharge from the nostrils, the eyes also discharge, the lids become gummed together, and the face swells. It is better to kill and burn birds so affected, as the disease is most contagious.

First rains after hot weather may bring on an outbreak of colds; new wheat is another factor.

In the way of prevention, mince raw onions and feed in the morning mash twice a week at the rate of two or three lb. per hundred birds. This is a good tonic.

The Pig Pen

THE BEST SOWS FOR BREEDING.

Mature and of Right Type.

Writing in the S.A. Journal of Agriculture, Messrs. L. and K. Bagshaw, of Saddleworth, give some good points in the breeding of pigs for the market.

When breeding, sows should be in good store condition and not fat. A fat sow will not have as many in the litter as a leaner sow, and also a fat sow is much more clumsy and is liable to lie on the litter when farrowing. Sows should be allowed to run out in a paddock until about a week or ten days before farrowing, and should then be shut in a special farrowing pen. This pen should be kept very clean, with a board floor (not cement, as it is too cold) and with a rail, say 8 inches high and 8 inches away from the wall, running around it. This prevents the sow from lying on her litter. When the sows are brought in from the paddock for farrowing, they should not be overfed. Too much food is more harmful than not enough. The sow should always be made to clean up her last meal before any more is given her.

A big mistake among breeders of the present day is the using of immature stock to get a quick return. In doing this one greatly shortens the life and breeding capacity of the stock. No boars should be used until they are at least 12 months old. They will work before that age, but if used they will not develop, and it greatly shortens their term of usefulness. Sows should never be mated until they are 13 months old. Recent experiments in Denmark have proved that sows mated after 13 months old will have on an average two pigs per litter more than those mated younger, and it is certainly more economical to the breed-

er to wait until that age than to mate younger and have inferior litters.

A farmer may produce the right type, but if he does not market them at the right age and size much of his good work goes for nothing. When mar-

keting pigs, they should not be over-fat and should be a suitable size and weight for the trade, e.g., pigs should be marketed either as porkers or as baconers, and not in between the two, as there is not the same demand for them.

HOME NOTES

HE FILLED HIS PLACE.

If you are a little discouraged at the humble kind of work you are doing, with little or no apparent recognition, remember these lines by Edgar Guest — and smile.

It wasn't much of a place he filled,

But he did his work, he ploughed and he tilled

And the greatest cause of his soul's unrest

Was the fear that he wouldn't do his best;

So he went ahead with a smile on his face,

With his head erect and a Christian grace,

It wasn't much of a place he filled—

But He filled his place!

The smell of smoke in a room can be dissipated by placing a bowl of water on the floor and leaving it remain overnight.

Tissue paper wrappers from fruit make good polishing material for windows and mirrors.

Putting fish in a plate, well salted and left for a few hours before cooking will prevent it from breaking while cooking.

A GOOD CLEANSER.

One cake sandsoap, 2 pkts. (small) Hudson's extract, 4 large cups boiling water. Mix all together. Put in airtight tins. This makes an excellent cleanser.

HOUSEHOLD HINTS.

Some helpful hints for our lady readers:—

To remove coffee, cocoa or fruit stains from a tablecloth, cover the stains with a paste made of borax and water. Then pour boiling water through it before washing the cloth in the usual way.

If there is soot in the curtains, soak them overnight in cold water, softened with borax before washing them.

Starched clothes iron better if a little borax is added when mixing the starch.

Before washing cotton fabrics for the first time, soak them in borax water to remove the dressing.

To clean cork carpet, wash in warm water with a handful of borax in it. Rinse and dry well, then wax polish.

TO MAKE HOUSEHOLD SOAP.

2 gall. soft rain water, 1 lb. tin caustic soda, 7 lb. clean fat, 2 oz. resin, small pkt. Lux, half bottle citronella.

Put water, fat and resin in kerosene bucket and when melted add caustic (a little at a time). Be careful, as it will boil over in a second if not watched. Boil for a while, then add Lux and citronella. Keep on the stove for an hour or so, over very low fire.

SPECIAL NOTICE TO FRUITGROWERS

All Members under Fidelity Bond

In response to numerous requests from growers for information as to who are members of the Wholesale Fruit Merchants' Association of Victoria the following list is given. All are members of the above Association, and are registered firms carrying on business in the

WHOLESALE FRUIT MARKET, MELBOURNE.

STAND NUMBERS ARE AS INDICATED IN PARENTHESES.

T. STOTT & SONS PTY. LTD. (26-36).
H. L. E. LOVETT & CO. (23).
A. E. PITT (14).
J. DAVIS PTY. LTD. (8).
W. S. TONG (31).
SILK BROS. PTY. LTD. (24-25).
J. G. MUMFORD (35).
GOLDEN VALLEY FRUIT CO. PTY. LTD. (15).
J. W. ROSS (13).
H. M. WADE & CO. (21).
DAVID SMITH PTY. LTD. (3).
SILBERT SHARP & DAVIES PTY. LTD. (17).
WATKINS FRUIT COMPANY PTY. LTD (5)

G. WOOLF & SONS (29-30).
R. CORNISH & SONS (5).
J. HYMAN & SON (51).
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YEE HOP LOONG & CO. (32).
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WING YOUNG & CO. (38).
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PRICE & KING PTY. LTD. (2).
REGAN & KENNY (Successors to Wm. Sweeney). (33).

Correspondence is invited by the Association.

Office : 21 Wholesale Fruit Market, Queen Street, Melbourne. Phone: F 4866.

TASMANIA

SEASONAL GROWING CONDITIONS — C.O.P. AND GOLDEN DELICIOUS APPLES DESERVE TO BE BETTER KNOWN — ACQUISITION PROCEDURE.

(By Our Correspondent.)

THE BENEFICIAL RAINS The factories are getting all they in March were followed by quite a long spell of fine warm weather in April, when we usually expect cold winds and frosty nights. Autumn growth was good in consequence, late varieties of fruit came on well, and green crops and grass made a good growth.

Picking and packing are still continuing. Small shipments are going to Sydney whenever space offers, and Democrats and Grannies are being packed for cool-store. The bulk of the Jons. appears to be still on the trees.

The factories are getting all they can process.

The C.O.P. crop seemed in fair demand, but prices are not in proportion to the quality of the fruit, the consumer apparently puts color before flavor. Another Apple that is not as popular as it deserves to be is the Golden Delicious, many people who have tried them consider they beat most other varieties in their season for juiciness and flavor. They only need to be more widely known to become popular.

Growers are seriously perturbed at having to leave the

fruit on the trees so late as they know it will be very detrimental to next year's crop and also makes it more difficult to cope with the moth menace which will become more serious each year under acquisition methods of harvesting.

The Hon. T. D'Alton, Minister for Agriculture (Tas.) addressed a meeting of growers at Huonville recently in support of the request for assistance to those growers who had suffered abnormally from climatic conditions and a resolution was passed unanimously to the effect that the Federal Government be asked to come to their assistance.

He also criticised the Marketing Board's methods of distribution of fruit within Tasmania, and pointed out the unnecessary expense incurred by the appointment of Clements and Marshall as sole agents for the Board with a lot of secondary distributors each getting their

cut out of it. It appears that Clements and Marshall get 5d. per case on all case fruit sold in Tasmania and sell to the distributors in bulk at a sixpenny (6d.) discount, making a charge of 11d. per case on the fruit plus an unnecessary cartage and handling. As the grower is only getting 3/- and 2/- for growing it for group No. 1 and 2 respectively it seems a big slice for commission.

I see the Select Committee appointed by the Government has commenced its sittings.

Gadabout is right in his idea that all who can and will sell fruit should be encouraged to do so.

I noticed Mr. Coxall's alternative to acquisition and the comment thereon in your April issue and agree with the comment. It should undoubtedly be an all-Australia scheme, and not for any one State or locality. I notice that Mr. Stevenson, the N.S.W. Superintendent, states that the actual cost to the Commonwealth Government of a case of Fancy 2½ inch Delicious produced in Orange and marketed in Sydney is 9/6, and for Jonathans 8/6. The same fruit from Tasmania would cost 6/6. Hobart, 20/4/41.

TASMANIAN FRUIT INDUSTRY.

"The primary industry that has been affected drastically by the war is the fruit industry—perhaps the most important industry in the State," said the Tasmanian Minister for Agriculture (Mr. D'Alton) at the Exeter Show during March.

In expressing sympathy for Tasmanian primary producers in difficulties caused by the war, Mr. D'Alton stated that reform was needed in several directions. He could not subscribe to the apparent policy of the Marketing Board for the Sydney market, at present disposing of N.S.W. Apples of poorer grade of inferior varieties before the extra fancy and fancy grade fruit was imported from Tasmania.

He believed the flax industry had come to stay and would be profitable.

TASMANIAN APPLE AND PEAR CROP.

ON ESTIMATES received from a large number of representative orchardists throughout Tasmania, "The Huon and Derwent Times" has compiled figures as follow, showing the 1939-40 production of Apples and the estimates for 1940-41.

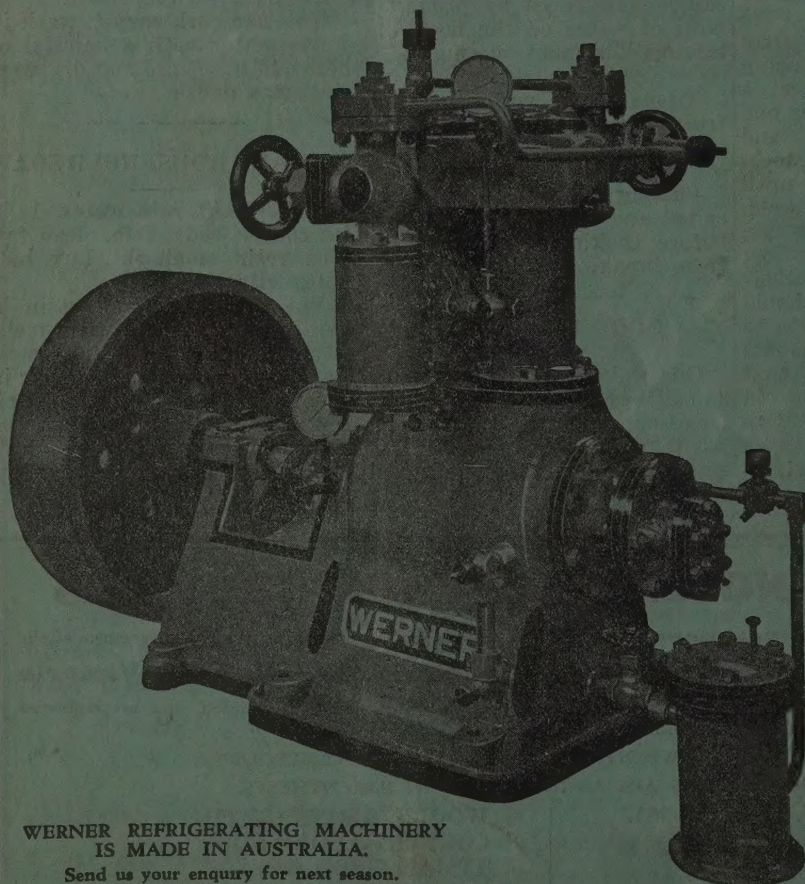
Variety.	1939-40	1940-41
Sturmiers	1,261,000	1,161,000
Jons.	788,000	747,000
Cleos.	638,000	573,000
Democrats	556,000	573,000
Scarlets	329,000	306,000
F. Crabs	263,000	188,000
G. Smiths	232,000	240,000
Cox's Orange	206,000	132,000
Croftons	185,000	164,000
Geev. Fanny	88,000	85,000
Other Vars.	602,000	531,000

5,148,000 4,700,000

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